



**NOTICE OF INTENT (NOI) FOR  
THE REMEDIATION GENERAL  
PERMIT (RGP)**

**226 HARVARD AVENUE  
ALLSTON, MASSACHUSETTS**

**Prepared for:  
Cumberland Farms, Inc  
777 Dedham Street  
Canton, MA**

**Project No. 91-205546  
February 11, 2008**

**Prepared By:  
ECS  
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A large, stylized silhouette of a tree is centered on the page. The tree is dark green and stands on a horizontal line that separates the upper and lower halves of the page. The background is a light green gradient with a subtle texture of grass or reeds at the bottom.

**WHERE BUSINESS AND THE ENVIRONMENT CONVERGE**



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

607 North Avenue, Suite 11, Wakefield, MA 01880 tel 781.246.8897 fax 781.246.8950 www.ecsconsult.com

February 12, 2008

File No. 91-205546

US Environmental Protection Agency  
Ann Herrick  
Industrial NPDES Permits (CIP)  
1 Congress Street, Suite 1100  
Boston, MA 02114-2023

RE: 226 Harvard Avenue  
Allston, MA

Dear Ms Herrick:

On behalf of Cumberland Farms, Inc., Environmental Compliance Services, Inc. is pleased to submit a Notice of Intent (NOI) for the Remediation General Permit (RGP) for the property located at 226 Harvard Avenue in Allston, Massachusetts. In December 2007 Cumberland Farms, Inc sold the property to 226 Harvard Associates, LLC. The objectives of the NOI and RGP are to properly manage, remove, and dispose of petroleum contaminated groundwater present at the Site under RTN 3-4435, which may be encountered during on-going construction activities being conducted on-site.

If you should have any questions concerning this submittal, please do not hesitate to contact our office.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

A handwritten signature in blue ink that reads 'Jessica L. Pfeifer'.

Jessica L. Pfeifer  
Geologist/Environmental Scientist

A handwritten signature in blue ink that reads 'Kelly Hurstak'.

Kelly Hurstak  
Senior Project Manager

## **B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit**

**1. General site information.** Please provide the following information about the site:

a) Name of facility/site: <b>Former Gasoline Station</b>		Facility/site address:	
Location of facility/site: longitude: <u>71°07'47"</u> latitude: <u>42°20'57"</u>	Facility SIC code(s):	Street: <b>226 Harvard Avenue</b>	
b) Name of facility/site owner: <b>Cumberland Farms, Inc</b>		Town: <b>Allston</b>	
Email address of owner: <b>CJohnson@cumberlandfarms.com</b>	State: <b>MA</b>	Zip: <b>02134</b>	County: <b>Suffolk</b>
Telephone no. of facility/site owner: <b>781-828-4900</b>	<b>Owner</b> is (check one): 1. Federal____ 2. State/Tribal____ 3. Private <input checked="" type="checkbox"/> 4. other, if so, describe:		
Fax no. of facility/site owner: <b>781-575-9536</b>			
Address of <b>owner</b> (if different from site):			
Street: <b>777 Dedham Street</b>			
Town: <b>Canton</b>	State: <b>MA</b>	Zip: <b>02021</b>	County: <b>Norfolk</b>
c) Legal name of <b>operator</b> :		<b>Operator</b> telephone no: <b>781-246-8897</b>	
Environmental Compliance Services, Inc		<b>Operator</b> fax no.: <b>781-246-8950</b>	<b>Operator</b> email: <b>KHurstak@ecsconsult.com</b>
<b>Operator</b> contact name and title: <b>James Smith Grade I-4 Waste Water Operator</b>			
Address of <b>operator</b> (if different from owner):		Street: <b>607 North Avenue, Suite 11</b>	
Town: <b>Wakefield</b>	State: <b>MA</b>	Zip: <b>01880</b>	County: <b>Middlesex</b>
d) Check "yes" or "no" for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes___ No <input checked="" type="checkbox"/> , if "yes," number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes___ No <input checked="" type="checkbox"/> , if "yes," date and tracking #: 3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes <input checked="" type="checkbox"/> No___ 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <input checked="" type="checkbox"/> No___			

<p>e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes___ No <input checked="" type="checkbox"/></p> <p>If “yes,” please list:</p> <ol style="list-style-type: none"> <li>1. site identification # assigned by the state of NH or MA:</li> <li>2. permit or license # assigned:</li> <li>3. state agency contact information: name, location, and telephone number:</li> </ol>	<p>f) Is the site/facility covered by any other EPA permit, including:</p> <ol style="list-style-type: none"> <li>1. multi-sector storm water general permit? Y___ N <input checked="" type="checkbox"/>, if Y, number:</li> <li>2. phase I or II construction storm water general permit? Y___ N <input checked="" type="checkbox"/>, if Y, number:</li> <li>3. individual NPDES permit? Y___ N <input checked="" type="checkbox"/>, if Y, number:</li> <li>4. any other water quality related permit? Y___ N <input checked="" type="checkbox"/>, if Y, number:</li> </ol>
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**2. Discharge information.** Please provide information about the discharge, (attaching additional sheets as needed) including:

<p>a) Describe the discharge activities for which the owner/applicant is seeking coverage:</p> <h2 style="margin: 0;">Construction Dewatering Discharge</h2>		
<p>b) Provide the following information about each discharge:</p>	<p>1) Number of discharge points:</p> <p style="font-size: 2em; font-weight: bold;">1</p>	<p>2) What is the <b>maximum</b> and <b>average flow rate</b> of discharge (in cubic feet per second, ft<sup>3</sup>/s)? Max. flow <u>0.12</u></p> <p>Average flow <u>0.05</u> Is maximum flow a <b>design value</b>? Y <input checked="" type="checkbox"/> N___</p> <p>For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.</p> <p style="font-size: 1.5em; font-weight: bold;">25 gallons per minute is the anticipated average flow rate.</p>
<p>3) Latitude and longitude of each discharge within 100 feet: pt.1:long. <u>71°07'47"</u> lat. <u>42°20'57"</u>; pt.2: long. _____ lat. _____; pt.3: long. _____ lat. _____; pt.4:long. _____ lat. _____; pt.5: long. _____ lat. _____; pt.6:long. _____ lat. _____; pt.7: long. _____ lat. _____; pt.8:long. _____ lat. _____; etc.</p>		
<p>4) If hydrostatic testing, total volume of the discharge (gals):</p> <p style="font-size: 1.2em; font-weight: bold;">N/A</p>		<p>5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal _____?</p> <p>Is discharge ongoing Yes <input checked="" type="checkbox"/> No _____?</p>
<p>c) Expected dates of discharge (mm/dd/yy): start <u>02/21/08</u> end <u>08/31/08</u></p>		
<p>d) Please attach a line drawing or flow schematic showing water flow through the facility including:</p> <ol style="list-style-type: none"> <li>1. sources of intake water,</li> <li>2. contributing flow from the operation,</li> <li>3. treatment units,</li> <li>and 4. discharge points and receiving waters(s).</li> </ol>		

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		✓	1	grab	SM2543D	4.00	31,000	8.461309	31,000	4.2306545
2. Total Residual Chlorine		✓	1	grab	HACH 8167	162	170	0.0464006	170	0.0232003
3. Total Petroleum Hydrocarbons		✓	1	grab	8100M	235	1,270	0.3466406	1,270	0.1733203
4. Cyanide	✓		1	grab	SM4500	19.7				
5. Benzene		✓	1	grab	8260B	5	77.8	0.021235	77.8	0.0106175
6. Toluene	✓		1	grab	8260B	5				
7. Ethylbenzene		✓	1	grab	8260B	5	14.4	0.0039302	14.4	0.0019651
8. (m,p,o) Xylenes		✓	1	grab	8260B	5	98.1	0.0267758	98.1	0.0133879
9. Total BTEX <sup>4</sup>		✓	1	grab	8260B	5	190.3	0.0519414	190.3	0.0259707

<sup>4</sup>BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide <sup>5</sup> (1,2- Dibromo-methane)	✓		1	grab	8260B	2				
11. Methyl-tert-Butyl Ether (MtBE)	✓		1	grab	8260B	5				
12. tert-Butyl Alcohol (TBA)			1	grab	8260B					
13. tert-Amyl Methyl Ether (TAME)			1	grab	8260B					
14. Naphthalene		✓	1	grab	8270C	1.01	1.53	0.000417	1.53	0.0002085
15. Carbon Tetra-chloride	✓		1	grab	8260B	2				
16. 1,4 Dichlorobenzene	✓		1	grab	8260B	5				
17. 1,2 Dichlorobenzene	✓		1	grab	8260B	5				
18. 1,3 Dichlorobenzene	✓		1	grab	8260B	5				
19. 1,1 Dichloroethane	✓		1	grab	8260B	5				
20. 1,2 Dichloroethane	✓		1	grab	8260B	2				
21. 1,1 Dichloroethylene	✓		1	grab	8260B	5				
22. cis-1,2 Dichloro-ethylene	✓		1	grab	8260B	5				
23. Dichloromethane (Methylene Chloride)	✓		1	grab	8260B	5				
24. Tetrachloroethylene	✓		1	grab	8260B	5				

<sup>5</sup>EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	grab	8260B	5				
26. 1,1,2 Trichloroethane	✓		1	grab	8260B	5				
27. Trichloroethylene	✓		1	grab	8260B	5				
28. Vinyl Chloride	✓		1	grab	8260B	2				
29. Acetone	✓		1	grab	8260B	5				
30. 1,4 Dioxane										
31. Total Phenols	✓		1	grab	8270C	1.01				
32. Pentachlorophenol	✓		1	grab	8270C	1.01				
33. Total Phthalates <sup>6</sup> (Phthalate esthers)	✓		1	grab	8270C	1.01				
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	grab	8270C	1.01				
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	grab	8270C					
a. Benzo(a) Anthracene	✓		1	grab	8270C	1.01				
b. Benzo(a) Pyrene	✓		1	grab	8270C	1.01				
c. Benzo(b)Fluoranthene	✓		1	grab	8270C	0.505				
d. Benzo(k) Fluoranthene	✓		1	grab	8270C	0.505				
e. Chrysene	✓		1	grab	8270C	1.01				

<sup>6</sup>The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✓		1	grab	8270C	0.101				
g. Indeno(1,2,3-cd) Pyrene	✓		1	grab	8270C	0.101				
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		✓	1	grab	8270C					
h. Acenaphthene	✓		1	grab	8270C	1.01				
i. Acenaphthylene	✓		1	grab	8270C	1.01				
j. Anthracene	✓		1	grab	8270C	1.01				
k. Benzo(ghi) Perylene	✓		1	grab	8270C	1.01				
l. Fluoranthene	✓		1	grab	8270C	1.01				
m. Fluorene	✓		1	grab	8270C	1.01				
n. Naphthalene-		✓	1	grab	8270C	1.01	1.53	0.000417	1.53	0.0002085
o. Phenanthrene	✓		1	grab	8270C	1.01				
p. Pyrene	✓		1	grab	8270C	1.01				
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	grab	8082	0.306				
38. Antimony	✓		1	grab	E200.9	1				
39. Arsenic	✓		1	grab	E200.9	1				
40. Cadmium	✓		1	grab	E200.9	1				
41. Chromium III	✓		1	grab	200.7	60				
42. Chromium VI	✓		1	grab	3500	50				



PARAMETER	Believe Absent	Believe Present	# of Samples (1 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6010B	40				
44. Lead	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	200.9	1	1.88	0.0005124	1.88	0.0002562
45. Mercury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	245.1	0.2				
46. Nickel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	6010B	4	4	0.0010916	4	0.0005458
47. Selenium	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	200.9	1				
48. Silver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	200.7	2				
49. Zinc	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6010B	100				
50. Iron	<input type="checkbox"/>	<input type="checkbox"/>	1	grab						
Other (describe):	<input type="checkbox"/>	<input type="checkbox"/>								

c) For discharges where **metals** are believed present, please fill out the following:

<p><i>Step 1:</i> Do any of the metals in the influent have a <b>reasonable potential</b> to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input type="checkbox"/> N <input checked="" type="checkbox"/></p>	<p>If yes, which metals?</p>
<p><i>Step 2:</i> For any metals which have <b>reasonable potential</b> to exceed the <b>Appendix III</b> limits, calculate the <b>dilution factor (DF)</b> using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: _____</p>	<p>Look up the limit calculated at the corresponding dilution factor in <b>Appendix IV</b>. Do any of the metals in the <b>influent</b> have the potential to exceed the corresponding <b>effluent</b> limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <input type="checkbox"/> N <input type="checkbox"/> If "Yes," list which metals:</p>

**4. Treatment system information.** Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank <input checked="" type="checkbox"/>	Air stripper	Oil/water separator	Equalization tanks	Bag filter <input checked="" type="checkbox"/>	GAC filter <input checked="" type="checkbox"/>
	Chlorination	Dechlorination	Other (please describe):			
c) Proposed <b>average</b> and <b>maximum flow rates</b> (gallons per minute) for the discharge and the <b>design flow rate(s)</b> (gallons per minute) of the treatment system: Average flow rate of discharge <u>25</u> Maximum flow rate of treatment system <u>50</u> Design flow rate of treatment system <u>50</u>						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets): <b>None</b>						

**5. Receiving surface water(s).** Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct <u>        </u>	Within facility <u>    </u>	Storm drain <input checked="" type="checkbox"/>	River/brook <u>        </u>	Wetlands <u>        </u>	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters: <b>Discharge to a storm drain located along Harvard Avenue which discharges to the Charles River</b>						
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.						
d) Provide the state water quality classification of the receiving water <b>B</b> <u>  </u> ,						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water <u>14.3</u> <u>  </u> cfs Please attach any calculation sheets used to support stream flow and dilution calculations.						
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes <input checked="" type="checkbox"/> No <u>        </u> If yes, for which pollutant(s)? <b>Low Dissolved Oxygen</b> Is there a TMDL? Yes <u>        </u> No <input checked="" type="checkbox"/> If yes, for which pollutant(s)?						

**6. Results of Consultation with Federal Services:** Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.


a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ___ No <input checked="" type="checkbox"/> Has any consultation with the federal services been completed? Yes <input checked="" type="checkbox"/> No ___ or is consultation underway? Yes ___ No ___ What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one): a “no jeopardy” opinion? <input checked="" type="checkbox"/> or written concurrence ___ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?
b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge? Yes ___ No <input checked="" type="checkbox"/> Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ___ No <input checked="" type="checkbox"/>

**7. Supplemental information. :**

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.
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**8. Signature Requirements:** The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Facility/Site Name:	Former Gasoline Station 226 Harvard Ave, Allston, MA
Operator signature:	
Title:	I-4 Waste Water Operator
Date:	02/12/08



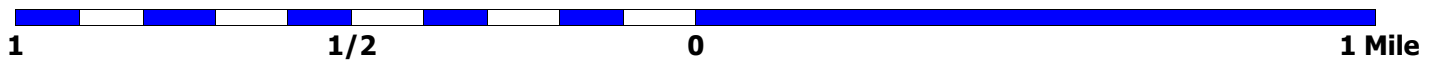
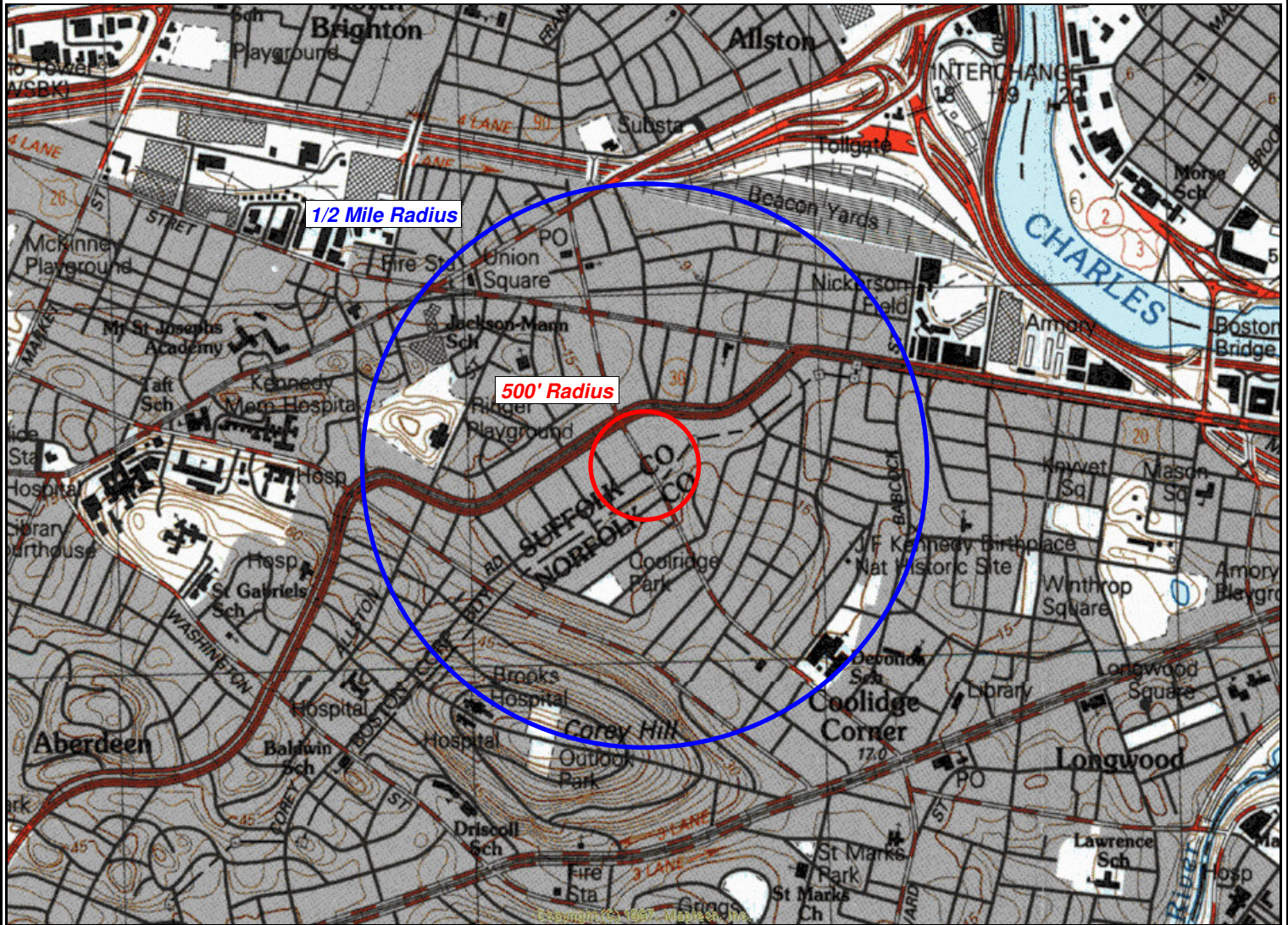
Environmental Compliance Services, Inc.  
607 North Avenue, Wakefield, MA 01880  
Phone (781)-246-8897 Fax (781)-246-8950  
www.ecsconsult.com

## **SITE LOCUS**

**Figure: 1**

**Cumberland Farms, Inc.**  
**226 Harvard Avenue**  
**Allston, MA**  
**02134**

Job Number: 91-205546



1 inch = 1500 feet

Contour Interval: 3 Meters

North

Base Map: U.S. Geological Survey; Quadrangle Location: Boston South

UTM Coordinates: 19 0324498 East / 46 90527 North

Map Edited: 1987

Map Revised:

Generated By: KVZ







## StreamStats Data-Collection Station Report

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**USGS Station Number** 01104500

**Station Name** CHARLES RIVER AT WALTHAM, MA

[Click here to link to available data on NWIS-Web for this site.](#)

### Descriptive Information

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Station Type	Gaging Station, continuous record
Regulated?	True
Period of Record	1931-present
Remarks	Flow affected by Mother Brook diversion, diversions to and from basin for municipal supplies, and reservoir regulations.
Latitude (degrees NAD83)	42.3723186
Longitude (degrees NAD83)	-71.2336667
Hydrologic unit code	01090001
Local Basin	20-Charles
County	017-Middlesex
MCD	72600-Waltham city
Directions to station	800 feet downstream from Moody Street

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### Physical Characteristics

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Characteristic Name	Value	Units	Citation Number
Drainage_Area	227	square miles	30

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### Streamflow Statistics

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Statistic Name	Value	Units	Citation Number
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**Peak-Flow Statistics**

10_Year_Peak_Flood	2410	cubic feet per second	12
100_Year_Peak_Flood	4200	cubic feet per second	12
25_Year_Peak_Flood	3070	cubic feet per second	12
50_Year_Peak_Flood	3610	cubic feet per second	12
500_Year_Peak_Flood	5780	cubic feet per second	12
Mean_Annual_Flood	502	cubic feet per second	12

**Low-Flow Statistics**

7_Day_10_Year_Low_Flow	14.3	cubic feet per second	19
7_Day_2_Year_Low_Flow	34	cubic feet per second	19

**Flow-Duration Statistics**

1_Percent_Duration	1380	cubic feet per second	41
10_Percent_Duration	680	cubic feet per second	41
20_Percent_Duration	495	cubic feet per second	41
25_Percent_Duration	430	cubic feet per second	41
30_Percent_Duration	377	cubic feet per second	41
40_Percent_Duration	292	cubic feet per second	41
5_Percent_Duration	880	cubic feet per second	41
50_Percent_Duration	222	cubic feet per second	41
60_Percent_Duration	167	cubic feet per second	41
70_Percent_Duration	118	cubic feet per second	41
75_Percent_Duration	97	cubic feet per second	41
80_Percent_Duration	77	cubic feet per second	41
90_Percent_Duration	44	cubic feet per second	41
95_Percent_Duration	30	cubic feet per second	41
99_Percent_Duration	7.9	cubic feet per second	41

**General Flow Statistics**

Average_daily_streamflow	309.739	cubic feet per second	41
Maximum_daily_flow	2940	cubic feet per second	41
Minimum_daily_flow	0.2	cubic feet per second	41
Std_Dev_of_daily_flows	296.365	cubic feet per second	41

**Base Flow Statistics**

Average_BFI_value	0.632	dimensionless	42
Number_of_years_to_compute_BFI	72	years	42
Std_dev_of_annual_BFI_values	0.087	dimensionless	42

**Citations**

Citation Number	Citation Name
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- 12 Murphy, P.J., 2001, Evaluation of mixed-population flood-frequency analysis: American Society of Civil Engineers, Journal of Hydrologic Engineering, v. 6, no. 1, p. 62-70
- 19 Wandle, S.W., Jr., 1984, Gazetteer of Hydrologic Characteristics of Streams in Massachusetts--Coastal River Basins of the North Shore and Massachusetts Bay: U.S. Geological Survey Water-Resources Investigations Report 84-4281.
- 30 Imported from NWIS file
- 41 Wolock, D.M., 2003, Flow characteristics at U.S. Geological Survey streamgages in the conterminous United States: U.S. Geological Survey Open-File Report 03-146, digital data set, available on World Wide Web at URL <http://water.usgs.gov/lookup/getspatial?qsitesdd>
- 42 Wolock, D.M., 2003, Base-flow index grid for the conterminous United States: U.S. Geological Survey Open-File Report 03-263, digital data set, available on World Wide Web at URL <http://water.usgs.gov/lookup/getspatial?bfi48grd>
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## StreamStats Data-Collection Station Report

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**USGS Station Number** 01104500

**Station Name** CHARLES RIVER AT WALTHAM, MA

[Click here to link to available data on NWIS-Web for this site.](#)

### Descriptive Information

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Station Type	Gaging Station, continuous record
Regulated?	True
Period of Record	1931-present
Remarks	Flow affected by Mother Brook diversion, diversions to and from basin for municipal supplies, and reservoir regulations.
Latitude (degrees NAD83)	42.3723186
Longitude (degrees NAD83)	-71.2336667
Hydrologic unit code	01090001
Local Basin	20-Charles
County	017-Middlesex
MCD	72600-Waltham city
Directions to station	800 feet downstream from Moody Street

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### Physical Characteristics

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Characteristic Name	Value	Units	Citation Number
Drainage_Area	227	square miles	30

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### Streamflow Statistics

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Statistic Name	Value	Units	Citation Number
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**Peak-Flow Statistics**

10_Year_Peak_Flood	2410	cubic feet per second	12
100_Year_Peak_Flood	4200	cubic feet per second	12
25_Year_Peak_Flood	3070	cubic feet per second	12
50_Year_Peak_Flood	3610	cubic feet per second	12
500_Year_Peak_Flood	5780	cubic feet per second	12
Mean_Annual_Flood	502	cubic feet per second	12

**Low-Flow Statistics**

7_Day_10_Year_Low_Flow	14.3	cubic feet per second	19
7_Day_2_Year_Low_Flow	34	cubic feet per second	19

**Flow-Duration Statistics**

1_Percent_Duration	1380	cubic feet per second	41
10_Percent_Duration	680	cubic feet per second	41
20_Percent_Duration	495	cubic feet per second	41
25_Percent_Duration	430	cubic feet per second	41
30_Percent_Duration	377	cubic feet per second	41
40_Percent_Duration	292	cubic feet per second	41
5_Percent_Duration	880	cubic feet per second	41
50_Percent_Duration	222	cubic feet per second	41
60_Percent_Duration	167	cubic feet per second	41
70_Percent_Duration	118	cubic feet per second	41
75_Percent_Duration	97	cubic feet per second	41
80_Percent_Duration	77	cubic feet per second	41
90_Percent_Duration	44	cubic feet per second	41
95_Percent_Duration	30	cubic feet per second	41
99_Percent_Duration	7.9	cubic feet per second	41

**General Flow Statistics**

Average_daily_streamflow	309.739	cubic feet per second	41
Maximum_daily_flow	2940	cubic feet per second	41
Minimum_daily_flow	0.2	cubic feet per second	41
Std_Dev_of_daily_flows	296.365	cubic feet per second	41

**Base\_Flow Statistics**

Average_BFI_value	0.632	dimensionless	42
Number_of_years_to_compute_BFI	72	years	42
Std_dev_of_annual_BFI_values	0.087	dimensionless	42

**Citations**

Citation Number	Citation Name
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- 
- 12 Murphy, P.J., 2001, Evaluation of mixed-population flood-frequency analysis: American Society of Civil Engineers, Journal of Hydrologic Engineering, v. 6, no. 1, p. 62-70
- 19 Wandle, S.W., Jr., 1984, Gazetteer of Hydrologic Characteristics of Streams in Massachusetts--Coastal River Basins of the North Shore and Massachusetts Bay: U.S. Geological Survey Water-Resources Investigations Report 84-4281.
- 30 Imported from NWIS file
- 41 Wolock, D.M., 2003, Flow characteristics at U.S. Geological Survey streamgages in the conterminous United States: U.S. Geological Survey Open-File Report 03-146, digital data set, available on World Wide Web at URL <http://water.usgs.gov/lookup/getspatial?qsitesdd>
- 42 Wolock, D.M., 2003, Base-flow index grid for the conterminous United States: U.S. Geological Survey Open-File Report 03-263, digital data set, available on World Wide Web at URL <http://water.usgs.gov/lookup/getspatial?bfi48grd>
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Friday, February 01, 2008

Kelly Hurstak  
ECS  
607 North Ave  
Wakefield, MA 01880

GeoLabs, Inc.  
45 Johnson Lane  
Braintree MA 02184  
Tele: 781 848 7844  
Fax: 781 848 7811

TEL: (781) 246-8897  
FAX: (781) 246-8950

Project: 91-205546  
Location:

Order No.: 0801281

Dear Kelly Hurstak:

GeoLabs, Inc. received 5 sample(s) on 1/28/2008 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

Analytical methods and results meet requirements of 310CMR 40.1056(J) as per MADEP Compendium of Analytical Methods (CAM).

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Jim Chen  
Laboratory Director

**Certifications:**

CT (PH-0148) - MA (M-MA015) - NH (2508) - NJ (MA009) - NY (11796) - RI (LA000252)

**CLIENT:** ECS  
**Project:** 91-205546  
**Lab Order:** 0801281

**CASE NARRATIVE**

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**MADEP MCP Response Action Analytical Report Certification Form**

Laboratory Name: GeoLabs, Inc.                      Project # 91-205546  
Project Location:                                      MADEP RTN #:

This form provides certification for the following data set: 0801281 (001-005)

Sample Matrix: Groundwater

MCP SW-846 Methods Used: VPH, EPH, 8260B, 6010B, 245.1, 8082, 8270C, 8100M

An affirmative answer to questions A, B and C are required for "Presumptive Certainty" status

A. Were all samples received by the laboratory in a condition consistent with that described on the Chain of custody documentation for the data set?      YES

B. Were all QA/QC procedures required for the specified method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate standards or guidelines?      YES

C. Does the analytical data included in this report meet all the requirements for "Presumptive Certainty" as described in Section 2.0 of the MADEP documents CAM VII A "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?      YES

D. VPH and EPH Methods only: Was the VPH or EPH Method conducted without significant modifications (see Section 11.3 of respective Methods)      N/A

A response to questions E and F are required for "Presumptive Certainty" status

E. Were all QC performance standards and recommendations for the specified methods achieved? NO

F. Were results for all analyte-list compounds/elements for the specified method(s) reported?  
YES

All NO answers need to be addressed in an attached Environmental Laboratory case narrative.

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**CLIENT:** ECS  
**Project:** 91-205546  
**Lab Order:** 0801281

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## CASE NARRATIVE

### CASE NARRATIVE

#### Physical Condition of Samples

The project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged, in appropriate containers with the correct preservation.

#### Project Documentation

The project was accompanied by satisfactory Chain of Custody documentation.

#### Analysis of Sample(s)

The following analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples:

8260 LCS percent recoveries for 1,2,4-Trichlorobenzene, Methyl Tert-Butyl Ether, and Naphthalene are outside the recovery limits.

8270 Method Blank percent recovery for 2,4,6-Tribromophenol is outside the recovery limits.

8270 LCS percent recoveries for 2,4-Dinitrophenol and 2,4,6-Tribromophenol are outside the recovery limits.

Sample 003 EPH Ranges surrogate COD fails due to emulsion in the sample.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:



Position: Lab Director

Printed Name: Jim Chen

Date: February 1, 2008

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**CLIENT:** ECS  
**Project:** 91-205546  
**Lab Order:** 0801281

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**CASE NARRATIVE**

EPH Methods

Method for Ranges: MADEP EPH 04-1.1  
Method for Target Analytes: 8270 GC/MS

Carbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C11-C22 Aromatic Hydrocarbons exclude concentrations of Target PAH Analytes

**CERTIFICATION:**

Were all QA/QC procedures REQUIRED by the EPH Method followed? YES

Were all performance/acceptance standards achieved? NO (See Case Narrative)

Were any significant modifications made to the EPH method? NO

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:



LAB DIRECTOR

PRINTED NAME: Jim Chen

DATE: February 1, 2008

**CLIENT:** ECS  
**Project:** 91-205546  
**Lab Order:** 0801281

## CASE NARRATIVE

### VPH Methods

Method for Ranges: MADEP VPH 04-1.1

Method for Target Analytes: MADEP VPH 04-1.1

Carbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.  
(MTBE, Benzene, Toluene)

C9-C12 Aliphatic Hydrocarbons exclude concentration of Target Analytes eluting in that range  
(Ethylbenzene, m&p-Xylenes, o-Xylene) AND concentration of C9-C10 Aromatic Hydrocarbons.

### CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? YES

Were all QA/QC performance/acceptance standards achieved? YES

Were any significant modifications made to the VPH method, as specified in Sec. 11.3? NO

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, accurate and complete.

SIGNATURE:



POSITION: LAB DIRECTOR

PRINTED NAME: Jim Chen

DATE: February 1, 2008



**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-001

**Client Sample ID:** NW-1  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>EPH RANGES - MADEP EPH</b>						Analyst: RuP
Adjusted C11-C22 Aromatics	172	99.5		µg/L	1	1/30/2008
C09-C18 Aliphatics	ND	99.5		µg/L	1	1/30/2008
C19-C36 Aliphatics	ND	99.5		µg/L	1	1/30/2008
Unadjusted C11-C22 Aromatics	211	99.5		µg/L	1	1/30/2008
Surr: 1-Chlorooctadecane	74.0	40-140		%REC	1	1/30/2008
Surr: o-Terphenyl	68.0	40-140		%REC	1	1/30/2008
<b>EPH TARGET ANALYTES - MADEP EPH</b>						Analyst: RDO
Naphthalene	30.9	0.995		µg/L	1	1/29/2008 4:30:00 PM
2-Methylnaphthalene	7.92	0.995		µg/L	1	1/29/2008 4:30:00 PM
Acenaphthene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Phenanthrene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Acenaphthylene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Fluorene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Anthracene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Fluoranthene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Pyrene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Benzo(a)Anthracene	ND	0.398		µg/L	1	1/29/2008 4:30:00 PM
Chrysene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Benzo(b)Fluoranthene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Benzo(k)Fluoranthene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Benzo(a)Pyrene	ND	0.199		µg/L	1	1/29/2008 4:30:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.398		µg/L	1	1/29/2008 4:30:00 PM
Dibenz(a,h)Anthracene	ND	0.398		µg/L	1	1/29/2008 4:30:00 PM
Benzo(g,h,i)Perylene	ND	0.995		µg/L	1	1/29/2008 4:30:00 PM
Total PAH Target Concentration	38.9	0		µg/L	1	1/29/2008 4:30:00 PM
Surr: 2,2'-Difluorobiphenyl	54.5	40-140		%REC	1	1/29/2008 4:30:00 PM
Surr: 2-Fluorobiphenyl	62.1	40-140		%REC	1	1/29/2008 4:30:00 PM
<b>VPH - MADEP VPH</b>						Analyst: MR
C9-C10 Aromatic Hydrocarbons	1290	75.0		µg/L	1	1/29/2008
Unadjusted C5-C8 Aliphatic Hydrocarbons	2910	75.0		µg/L	1	1/29/2008
Unadjusted C9-C12 Aliphatic Hydrocarbons	3360	75.0		µg/L	1	1/29/2008
Methyl Tert-Butyl Ether	ND	5.00		µg/L	1	1/29/2008
Benzene	ND	5.00		µg/L	1	1/29/2008
Toluene	22.5	5.00		µg/L	1	1/29/2008
Ethylbenzene	338	5.00		µg/L	1	1/29/2008
m,p-Xylene	999	5.00		µg/L	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**GeoLabs, Inc.****Reported Date:** 01-Feb-08

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-001

**Client Sample ID:** NW-1  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>VPH - MADEP VPH</b>						
						Analyst: <b>MR</b>
o-Xylene	19.8	5.00		µg/L	1	1/29/2008
Naphthalene	142	20.0		µg/L	1	1/29/2008
Adjusted C5-C8 Aliphatic Hydrocarbons	2890	75.0		µg/L	1	1/29/2008
Adjusted C9-C12 Aliphatic Hydrocarbons	713	75.0		µg/L	1	1/29/2008
Surr: 2,5-Dibromotoluene FID	125	70-130		%REC	1	1/29/2008
Surr: 2,5-Dibromotoluene PID	97.0	70-130		%REC	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**GeoLabs, Inc.**
**Reported Date:** 01-Feb-08

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-002

**Client Sample ID:** NW-2  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>EPH RANGES - MADEP EPH</b>						
						Analyst: RuP
Adjusted C11-C22 Aromatics	ND	100		µg/L	1	1/30/2008
C09-C18 Aliphatics	ND	100		µg/L	1	1/30/2008
C19-C36 Aliphatics	ND	100		µg/L	1	1/30/2008
Unadjusted C11-C22 Aromatics	ND	100		µg/L	1	1/30/2008
Surr: 1-Chlorooctadecane	70.0	40-140		%REC	1	1/30/2008
Surr: o-Terphenyl	71.0	40-140		%REC	1	1/30/2008
<b>EPH TARGET ANALYTES - MADEP EPH</b>						
						Analyst: RDO
Naphthalene	14.7	1.00		µg/L	1	1/29/2008 5:43:00 PM
2-Methylnaphthalene	3.83	1.00		µg/L	1	1/29/2008 5:43:00 PM
Acenaphthene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Phenanthrene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Acenaphthylene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Fluorene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Anthracene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Fluoranthene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Pyrene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Benzo(a)Anthracene	ND	0.400		µg/L	1	1/29/2008 5:43:00 PM
Chrysene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Benzo(b)Fluoranthene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Benzo(k)Fluoranthene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Benzo(a)Pyrene	ND	0.200		µg/L	1	1/29/2008 5:43:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.400		µg/L	1	1/29/2008 5:43:00 PM
Dibenz(a,h)Anthracene	ND	0.400		µg/L	1	1/29/2008 5:43:00 PM
Benzo(g,h,i)Perylene	ND	1.00		µg/L	1	1/29/2008 5:43:00 PM
Total PAH Target Concentration	18.5	0		µg/L	1	1/29/2008 5:43:00 PM
Surr: 2,2'-Difluorobiphenyl	55.1	40-140		%REC	1	1/29/2008 5:43:00 PM
Surr: 2-Fluorobiphenyl	55.4	40-140		%REC	1	1/29/2008 5:43:00 PM
<b>VPH - MADEP VPH</b>						
						Analyst: MR
C9-C10 Aromatic Hydrocarbons	531	75.0		µg/L	1	1/29/2008
Unadjusted C5-C8 Aliphatic Hydrocarbons	1720	75.0		µg/L	1	1/29/2008
Unadjusted C9-C12 Aliphatic Hydrocarbons	1160	75.0		µg/L	1	1/29/2008
Methyl Tert-Butyl Ether	ND	5.00		µg/L	1	1/29/2008
Benzene	ND	5.00		µg/L	1	1/29/2008
Toluene	19.9	5.00		µg/L	1	1/29/2008
Ethylbenzene	147	5.00		µg/L	1	1/29/2008
m,p-Xylene	342	5.00		µg/L	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**GeoLabs, Inc.****Reported Date:** 01-Feb-08

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-002

**Client Sample ID:** NW-2  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>VPH - MADEP VPH</b>						Analyst: <b>MR</b>
o-Xylene	113	5.00		µg/L	1	1/29/2008
Naphthalene	36.8	20.0		µg/L	1	1/29/2008
Adjusted C5-C8 Aliphatic Hydrocarbons	1700	75.0		µg/L	1	1/29/2008
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Surr: 2,5-Dibromotoluene FID	99.3	70-130		%REC	1	1/29/2008
Surr: 2,5-Dibromotoluene PID	77.6	70-130		%REC	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

CLIENT: ECS  
 Lab Order: 0801281  
 Project: 91-205546  
 Lab ID: 0801281-003

Client Sample ID: NW-3  
 Collection Date: 1/28/2008  
 Date Received: 1/28/2008  
 Matrix: GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>EPH RANGES - MADEP EPH</b>						
Adjusted C11-C22 Aromatics	ND	100		µg/L	1	1/30/2008
C09-C18 Aliphatics	140	100		µg/L	1	1/30/2008
C19-C36 Aliphatics	111	100		µg/L	1	1/30/2008
Unadjusted C11-C22 Aromatics	229	100		µg/L	1	1/30/2008
Surr: 1-Chlorooctadecane	38.0	40-140	S	%REC	1	1/30/2008
Surr: o-Terphenyl	57.0	40-140		%REC	1	1/30/2008

**NOTES:**

\* Low surrogate recovery caused by emulsions during extraction procedure. The method is in control as indicated by the laboratory control sample (LCS).

<b>EPH TARGET ANALYTES - MADEP EPH</b>						
						Analyst: RDO
Naphthalene	54.2	1.00		µg/L	1	1/31/2008 4:33:00 PM
2-Methylnaphthalene	15.7	1.00		µg/L	1	1/31/2008 4:33:00 PM
Acenaphthene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Phenanthrene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Acenaphthylene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Fluorene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Anthracene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Fluoranthene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Pyrene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Benzo(a)Anthracene	ND	0.400		µg/L	1	1/31/2008 4:33:00 PM
Chrysene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Benzo(b)Fluoranthene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Benzo(k)Fluoranthene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Benzo(a)Pyrene	ND	0.200		µg/L	1	1/31/2008 4:33:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.400		µg/L	1	1/31/2008 4:33:00 PM
Dibenz(a,h)Anthracene	ND	0.400		µg/L	1	1/31/2008 4:33:00 PM
Benzo(g,h,i)Perylene	ND	1.00		µg/L	1	1/31/2008 4:33:00 PM
Total PAH Target Concentration	69.9	0		µg/L	1	1/31/2008 4:33:00 PM
Surr: 2,2'-Difluorobiphenyl	69.3	40-140		%REC	1	1/31/2008 4:33:00 PM
Surr: 2-Fluorobiphenyl	78.8	40-140		%REC	1	1/31/2008 4:33:00 PM

<b>VPH - MADEP VPH</b>						
						Analyst: MR
C9-C10 Aromatic Hydrocarbons	244	75.0		µg/L	1	1/29/2008
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Unadjusted C9-C12 Aliphatic Hydrocarbons	421	75.0		µg/L	1	1/29/2008
Methyl Tert-Butyl Ether	ND	5.00		µg/L	1	1/29/2008
Benzene	ND	5.00		µg/L	1	1/29/2008
Toluene	25.9	5.00		µg/L	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**GeoLabs, Inc.****Reported Date:** 01-Feb-08

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-003

**Client Sample ID:** NW-3  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>VPH - MADEP VPH</b>						Analyst: MR
Ethylbenzene	33.5	5.00		µg/L	1	1/29/2008
m,p-Xylene	84.8	5.00		µg/L	1	1/29/2008
o-Xylene	54.8	5.00		µg/L	1	1/29/2008
Naphthalene	44.5	20.0		µg/L	1	1/29/2008
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Surr: 2,5-Dibromotoluene FID	124	70-130		%REC	1	1/29/2008
Surr: 2,5-Dibromotoluene PID	102	70-130		%REC	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-004

**Client Sample ID:** LFR-3  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>EPH RANGES - MADEP EPH</b>						
						Analyst: RuP
Adjusted C11-C22 Aromatics	ND	99.5		µg/L	1	1/30/2008
C09-C18 Aliphatics	ND	99.5		µg/L	1	1/30/2008
C19-C36 Aliphatics	ND	99.5		µg/L	1	1/30/2008
Unadjusted C11-C22 Aromatics	ND	99.5		µg/L	1	1/30/2008
Surr: 1-Chlorooctadecane	52.0	40-140		%REC	1	1/30/2008
Surr: o-Terphenyl	64.0	40-140		%REC	1	1/30/2008
<b>EPH TARGET ANALYTES - MADEP EPH</b>						
						Analyst: RDO
Naphthalene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
2-Methylnaphthalene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Acenaphthene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Phenanthrene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Acenaphthylene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Fluorene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Anthracene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Fluoranthene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Pyrene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Benzo(a)Anthracene	ND	0.398		µg/L	1	1/29/2008 6:21:00 PM
Chrysene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Benzo(b)Fluoranthene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Benzo(k)Fluoranthene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Benzo(a)Pyrene	ND	0.199		µg/L	1	1/29/2008 6:21:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.398		µg/L	1	1/29/2008 6:21:00 PM
Dibenz(a,h)Anthracene	ND	0.398		µg/L	1	1/29/2008 6:21:00 PM
Benzo(g,h,i)Perylene	ND	0.995		µg/L	1	1/29/2008 6:21:00 PM
Total PAH Target Concentration	ND	0		µg/L	1	1/29/2008 6:21:00 PM
Surr: 2,2'-Difluorobiphenyl	71.1	40-140		%REC	1	1/29/2008 6:21:00 PM
Surr: 2-Fluorobiphenyl	64.8	40-140		%REC	1	1/29/2008 6:21:00 PM
<b>VPH - MADEP VPH</b>						
						Analyst: MR
C9-C10 Aromatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Unadjusted C5-C8 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Unadjusted C9-C12 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Methyl Tert-Butyl Ether	ND	5.00		µg/L	1	1/29/2008
Benzene	ND	5.00		µg/L	1	1/29/2008
Toluene	ND	5.00		µg/L	1	1/29/2008
Ethylbenzene	5.31	5.00		µg/L	1	1/29/2008
m,p-Xylene	7.34	5.00		µg/L	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**GeoLabs, Inc.****Reported Date:** 01-Feb-08

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-004

**Client Sample ID:** LFR-3  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>VPH - MADEP VPH</b>						
						Analyst: MR
o-Xylene	ND	5.00		µg/L	1	1/29/2008
Naphthalene	ND	20.0		µg/L	1	1/29/2008
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Surr: 2,5-Dibromotoluene FID	94.8	70-130		%REC	1	1/29/2008
Surr: 2,5-Dibromotoluene PID	82.8	70-130		%REC	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit



**GeoLabs, Inc.**
**Reported Date:** 01-Feb-08

<b>CLIENT:</b>	ECS	<b>Client Sample ID:</b>	LFR-1
<b>Lab Order:</b>	0801281	<b>Collection Date:</b>	1/28/2008
<b>Project:</b>	91-205546	<b>Date Received:</b>	1/28/2008
<b>Lab ID:</b>	0801281-005	<b>Matrix:</b>	GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>TOTAL SUSPENDED SOLIDS - SM2540-D</b>						
Total Suspended Solids	31.0	4.00		mg/L	1	1/28/2008
<b>EPH RANGES - MADEP EPH</b>						
Adjusted C11-C22 Aromatics	ND	123		µg/L	1	1/30/2008
C09-C18 Aliphatics	ND	123		µg/L	1	1/30/2008
C19-C36 Aliphatics	ND	123		µg/L	1	1/30/2008
Unadjusted C11-C22 Aromatics	ND	123		µg/L	1	1/30/2008
Surr: 1-Chlorooctadecane	55.0	40-140		%REC	1	1/30/2008
Surr: o-Terphenyl	80.0	40-140		%REC	1	1/30/2008
<b>TOTAL PETROLEUM HYDROCARBONS - 8100M</b>						
Total Petroleum Hydrocarbons	1.27	0.235		mg/L	1	1/29/2008
Surr: o-Terphenyl	59.0	40-140		%REC	1	1/29/2008
<b>POLYCHLORINATED BIPHENYLS - SW8082</b>						
Aroclor 1016/1242	ND	0.306		µg/L	1	1/29/2008
Aroclor 1221	ND	0.306		µg/L	1	1/29/2008
Aroclor 1232	ND	0.306		µg/L	1	1/29/2008
Aroclor 1248	ND	0.306		µg/L	1	1/29/2008
Aroclor 1254	ND	0.306		µg/L	1	1/29/2008
Aroclor 1260	ND	0.306		µg/L	1	1/29/2008
Aroclor 1262	ND	0.306		µg/L	1	1/29/2008
Aroclor 1268	ND	0.306		µg/L	1	1/29/2008
Surr: Decachlorobiphenyl Sig 1	82.0	30-150		%REC	1	1/29/2008
Surr: Decachlorobiphenyl Sig 2	96.0	30-150		%REC	1	1/29/2008
Surr: Tetrachloro-m-Xylene Sig 1	82.0	30-150		%REC	1	1/29/2008
Surr: Tetrachloro-m-Xylene Sig 2	80.0	30-150		%REC	1	1/29/2008
<b>TOTAL METALS BY GFAA - E200.9</b>						
Antimony	ND	0.00100		mg/L	1	2/1/2008
Arsenic	ND	0.00100		mg/L	1	1/29/2008
Cadmium	ND	0.00100		mg/L	1	1/31/2008
Lead	0.00188	0.00100		mg/L	1	1/29/2008
Selenium	ND	0.00100		mg/L	1	2/1/2008
Thallium	ND	0.00100		mg/L	1	1/31/2008
<b>TOTAL METALS BY ICP - SW6010B</b>						
Beryllium	ND	0.00400		mg/L	1	1/30/2008

<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	BRL	Below Reporting Limit
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside recovery limits		

**GeoLabs, Inc.**
**Reported Date:** 01-Feb-08

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-005

**Client Sample ID:** LFR-1  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS BY ICP - SW6010B</b>						Analyst: <b>QS</b>
Chromium	ND	0.0800		mg/L	1	1/30/2008
Copper	ND	0.0400		mg/L	1	1/30/2008
Nickel	0.00400	0.00400		mg/L	1	1/30/2008
Zinc	ND	0.100		mg/L	1	1/30/2008
<b>TOTAL SILVER - E200.7</b>						Analyst: <b>QS</b>
Silver	ND	0.00200		mg/L	1	1/30/2008
<b>TOTAL MERCURY - E245.1</b>						Analyst: <b>FC</b>
Mercury	ND	0.0002		mg/L	1	1/29/2008
<b>SEMIVOLATILE ORGANICS - SW8270C</b>						Analyst: <b>RDO</b>
1,2,4-Trichlorobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
1,2-Dichlorobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
1,2-Dinitrobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
1,3-Dichlorobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
1,3-Dinitrobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
1,4-Dichlorobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
1,4-Dinitrobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2,3,4,6-Tetrachlorophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2,4,5-Trichlorophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2,4,6-Trichlorophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2,4-Dichlorophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2,4-Dimethylphenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2,4-Dinitrophenol	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
2,4-Dinitrotoluene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2,6-Dinitrotoluene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2-Chloronaphthalene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2-Chlorophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2-Methylnaphthalene	1.31	1.01		µg/L	1	1/29/2008 1:24:00 PM
2-Methylphenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2-Nitroaniline	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
2-Nitrophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
3,3'-Dichlorobenzidine	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
3-Methylphenol/4-Methylphenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
3-Nitroaniline	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
4,6-Dinitro-2-Methylphenol	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
4-Bromophenyl Phenyl Ether	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
4-Chloro-3-Methylphenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM

**Qualifiers:**  
 B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-005

**Client Sample ID:** LFR-1  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANICS - SW8270C</b>						Analyst: RDO
4-Chloroaniline	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
4-Chlorophenyl Phenyl Ether	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
4-Nitroaniline	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
4-Nitrophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Acenaphthene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Acenaphthylene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Acetophenone	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Aniline	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
Anthracene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Azobenzene	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
Benz(a)Anthracene	ND	0.101		µg/L	1	1/29/2008 1:24:00 PM
Benzidine	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
Benzo(a)Pyrene	ND	0.101		µg/L	1	1/29/2008 1:24:00 PM
Benzo(b)Fluoranthene	ND	0.505		µg/L	1	1/29/2008 1:24:00 PM
Benzo(g,h,i)Perylene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Benzo(k)Fluoranthene	ND	0.505		µg/L	1	1/29/2008 1:24:00 PM
Benzyl Alcohol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Bis(2-Chloroethoxy)Methane	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Bis(2-Chloroethyl)Ether	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Bis(2-Chloroisopropyl)Ether	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Bis(2-Ethylhexyl)Phthalate	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Butyl Benzyl Phthalate	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Carbazole	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Chrysene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Dibenz(a,h)Anthracene	ND	0.101		µg/L	1	1/29/2008 1:24:00 PM
Dibenzofuran	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Diethyl Phthalate	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Dimethyl Phthalate	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Di-n-Butyl Phthalate	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Di-n-Octyl Phthalate	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Fluoranthene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Fluorene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Hexachlorobenzene	ND	0.101		µg/L	1	1/29/2008 1:24:00 PM
Hexachlorobutadiene	ND	0.101		µg/L	1	1/29/2008 1:24:00 PM
Hexachlorocyclopentadiene	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
Hexachloroethane	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.101		µg/L	1	1/29/2008 1:24:00 PM
Isophorone	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Naphthalene	1.53	1.01		µg/L	1	1/29/2008 1:24:00 PM
Nitrobenzene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM

**Qualifiers:** B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

CLIENT: ECS  
 Lab Order: 0801281  
 Project: 91-205546  
 Lab ID: 0801281-005

Client Sample ID: LFR-1  
 Collection Date: 1/28/2008  
 Date Received: 1/28/2008  
 Matrix: GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANICS - SW8270C</b>						Analyst: RDO
N-Nitrosodimethylamine	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
N-Nitrosodi-n-Propylamine	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
N-Nitrosodiphenylamine	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
Pentachlorophenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Phenanthrene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Phenol	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Pyrene	ND	1.01		µg/L	1	1/29/2008 1:24:00 PM
Pyridine	ND	5.05		µg/L	1	1/29/2008 1:24:00 PM
Surr: 2,4,6-Tribromophenol	176	15-110	S	%REC	1	1/29/2008 1:24:00 PM
Surr: 2-Fluorobiphenyl	47.6	30-130		%REC	1	1/29/2008 1:24:00 PM
Surr: 2-Fluorophenol	66.3	15-110		%REC	1	1/29/2008 1:24:00 PM
Surr: Nitrobenzene-d5	54.8	30-130		%REC	1	1/29/2008 1:24:00 PM
Surr: Phenol-d6	54.3	15-110		%REC	1	1/29/2008 1:24:00 PM
Surr: Terphenyl-d14	51.2	30-130		%REC	1	1/29/2008 1:24:00 PM
<b>EPH TARGET ANALYTES - MADEP EPH</b>						Analyst: RDO
Naphthalene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
2-Methylnaphthalene	1.85	1.23		µg/L	1	1/29/2008 6:58:00 PM
Acenaphthene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Phenanthrene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Acenaphthylene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Fluorene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Anthracene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Fluoranthene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Pyrene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Benzo(a)Anthracene	ND	0.494		µg/L	1	1/29/2008 6:58:00 PM
Chrysene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Benzo(b)Fluoranthene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Benzo(k)Fluoranthene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Benzo(a)Pyrene	ND	0.247		µg/L	1	1/29/2008 6:58:00 PM
Indeno(1,2,3-cd)Pyrene	ND	0.494		µg/L	1	1/29/2008 6:58:00 PM
Dibenz(a,h)Anthracene	ND	0.494		µg/L	1	1/29/2008 6:58:00 PM
Benzo(g,h,i)Perylene	ND	1.23		µg/L	1	1/29/2008 6:58:00 PM
Total PAH Target Concentration	1.85	0		µg/L	1	1/29/2008 6:58:00 PM
Surr: 2,2'-Difluorobiphenyl	64.1	40-140		%REC	1	1/29/2008 6:58:00 PM
Surr: 2-Fluorobiphenyl	66.6	40-140		%REC	1	1/29/2008 6:58:00 PM
<b>VOLATILE ORGANIC COMPOUNDS - SW8260B</b>						Analyst: MR
1,1,1,2-Tetrachloroethane	ND	5.00		µg/L	1	1/29/2008

Qualifiers: B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

# GeoLabs, Inc.

Reported Date: 01-Feb-08

CLIENT: ECS  
Lab Order: 0801281  
Project: 91-205546  
Lab ID: 0801281-005

Client Sample ID: LFR-1  
Collection Date: 1/28/2008  
Date Received: 1/28/2008  
Matrix: GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS - SW8260B</b>						Analyst: MR
1,1,1-Trichloroethane	ND	5.00		µg/L	1	1/29/2008
1,1,2,2-Tetrachloroethane	ND	2.00		µg/L	1	1/29/2008
1,1,2-Trichloroethane	ND	5.00		µg/L	1	1/29/2008
1,1-Dichloroethane	ND	5.00		µg/L	1	1/29/2008
1,1-Dichloroethene	ND	5.00		µg/L	1	1/29/2008
1,1-Dichloropropene	ND	5.00		µg/L	1	1/29/2008
1,2,3-Trichlorobenzene	ND	5.00		µg/L	1	1/29/2008
1,2,3-Trichloropropane	ND	5.00		µg/L	1	1/29/2008
1,2,4-Trichlorobenzene	ND	5.00		µg/L	1	1/29/2008
1,2,4-Trimethylbenzene	44.9	5.00		µg/L	1	1/29/2008
1,2-Dibromo-3-Chloropropane	ND	5.00		µg/L	1	1/29/2008
1,2-Dibromoethane	ND	2.00		µg/L	1	1/29/2008
1,2-Dichlorobenzene	ND	5.00		µg/L	1	1/29/2008
1,2-Dichloroethane	ND	2.00		µg/L	1	1/29/2008
1,2-Dichloropropane	ND	2.00		µg/L	1	1/29/2008
1,3,5-Trimethylbenzene	11.3	5.00		µg/L	1	1/29/2008
1,3-Dichlorobenzene	ND	5.00		µg/L	1	1/29/2008
1,3-Dichloropropane	ND	5.00		µg/L	1	1/29/2008
1,4-Dichlorobenzene	ND	5.00		µg/L	1	1/29/2008
2,2-Dichloropropane	ND	5.00		µg/L	1	1/29/2008
2-Butanone	ND	10.0		µg/L	1	1/29/2008
2-Chloroethyl Vinyl Ether	ND	5.00		µg/L	1	1/29/2008
2-Chlorotoluene	ND	5.00		µg/L	1	1/29/2008
2-Hexanone	ND	10.0		µg/L	1	1/29/2008
4-Chlorotoluene	ND	5.00		µg/L	1	1/29/2008
4-Isopropyltoluene	ND	5.00		µg/L	1	1/29/2008
4-Methyl-2-Pentanone	ND	5.00		µg/L	1	1/29/2008
Acetone	ND	50.0		µg/L	1	1/29/2008
Acrolein	ND	50.0		µg/L	1	1/29/2008
Acrylonitrile	ND	50.0		µg/L	1	1/29/2008
Benzene	77.8	5.00		µg/L	1	1/29/2008
Bromobenzene	ND	5.00		µg/L	1	1/29/2008
Bromochloromethane	ND	2.00		µg/L	1	1/29/2008
Bromodichloromethane	ND	2.00		µg/L	1	1/29/2008
Bromoform	ND	2.00		µg/L	1	1/29/2008
Bromomethane	ND	2.00		µg/L	1	1/29/2008
Carbon Disulfide	ND	5.00		µg/L	1	1/29/2008
Carbon Tetrachloride	ND	2.00		µg/L	1	1/29/2008
Chlorobenzene	ND	5.00		µg/L	1	1/29/2008
Chloroethane	ND	5.00		µg/L	1	1/29/2008

Qualifiers: B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit

CLIENT: ECS  
 Lab Order: 0801281  
 Project: 91-205546  
 Lab ID: 0801281-005

Client Sample ID: LFR-1  
 Collection Date: 1/28/2008  
 Date Received: 1/28/2008  
 Matrix: GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>VOLATILE ORGANIC COMPOUNDS - SW8260B</b>						Analyst: MR
Chloroform	ND	5.00		µg/L	1	1/29/2008
Chloromethane	ND	5.00		µg/L	1	1/29/2008
cis-1,2-Dichloroethene	ND	5.00		µg/L	1	1/29/2008
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	1/29/2008
Dibromochloromethane	ND	2.00		µg/L	1	1/29/2008
Dibromomethane	ND	5.00		µg/L	1	1/29/2008
Dichlorodifluoromethane	ND	5.00		µg/L	1	1/29/2008
Ethylbenzene	14.4	5.00		µg/L	1	1/29/2008
Hexachlorobutadiene	ND	0.500		µg/L	1	1/29/2008
Isopropylbenzene	6.75	5.00		µg/L	1	1/29/2008
Methyl Tert-Butyl Ether	ND	5.00		µg/L	1	1/29/2008
Methylene Chloride	ND	5.00		µg/L	1	1/29/2008
Naphthalene	ND	20.0		µg/L	1	1/29/2008
n-Butylbenzene	ND	5.00		µg/L	1	1/29/2008
n-Propylbenzene	8.59	5.00		µg/L	1	1/29/2008
sec-Butylbenzene	ND	5.00		µg/L	1	1/29/2008
Styrene	ND	5.00		µg/L	1	1/29/2008
tert-Butylbenzene	ND	5.00		µg/L	1	1/29/2008
Tetrachloroethene	ND	5.00		µg/L	1	1/29/2008
Toluene	ND	5.00		µg/L	1	1/29/2008
trans-1,2-Dichloroethene	ND	5.00		µg/L	1	1/29/2008
trans-1,3-Dichloropropene	ND	0.500		µg/L	1	1/29/2008
Trichloroethene	ND	5.00		µg/L	1	1/29/2008
Trichlorofluoromethane	ND	5.00		µg/L	1	1/29/2008
Vinyl Chloride	ND	2.00		µg/L	1	1/29/2008
Xylenes, Total	98.1	5.00		µg/L	1	1/29/2008
Surr: 1,2-Dichloroethane-d4	116	70-130		%REC	1	1/29/2008
Surr: 4-Bromofluorobenzene	98.7	70-130		%REC	1	1/29/2008
Surr: Dibromofluoromethane	106	70-130		%REC	1	1/29/2008
Surr: Toluene-d8	86.4	70-130		%REC	1	1/29/2008

**VPH - MADEP VPH**

Analyst: MR

C9-C10 Aromatic Hydrocarbons	98.5	75.0		µg/L	1	1/29/2008
Unadjusted C5-C8 Aliphatic Hydrocarbons	328	75.0		µg/L	1	1/29/2008
Unadjusted C9-C12 Aliphatic Hydrocarbons	223	75.0		µg/L	1	1/29/2008
Methyl Tert-Butyl Ether	ND	5.00		µg/L	1	1/29/2008
Benzene	53.0	5.00		µg/L	1	1/29/2008
Toluene	ND	5.00		µg/L	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

**GeoLabs, Inc.**
**Reported Date:** 01-Feb-08

**CLIENT:** ECS  
**Lab Order:** 0801281  
**Project:** 91-205546  
**Lab ID:** 0801281-005

**Client Sample ID:** LFR-1  
**Collection Date:** 1/28/2008  
**Date Received:** 1/28/2008  
**Matrix:** GROUNDWATER

Analyses	Result	Det. Limit	Qual	Units	DF	Date Analyzed
<b>VPH - MADEP VPH</b>						
						Analyst: <b>MR</b>
Ethylbenzene	17.2	5.00		µg/L	1	1/29/2008
m,p-Xylene	97.3	5.00		µg/L	1	1/29/2008
o-Xylene	ND	5.00		µg/L	1	1/29/2008
Naphthalene	ND	20.0		µg/L	1	1/29/2008
Adjusted C5-C8 Aliphatic Hydrocarbons	275	75.0		µg/L	1	1/29/2008
Adjusted C9-C12 Aliphatic Hydrocarbons	ND	75.0		µg/L	1	1/29/2008
Surr: 2,5-Dibromotoluene FID	106	70-130		%REC	1	1/29/2008
Surr: 2,5-Dibromotoluene PID	83.6	70-130		%REC	1	1/29/2008
<b>CYANIDE, TOTAL - SM4500-CN-C,E</b>						
						Analyst: <b>WFR</b>
Cyanide, Total	ND	0.0197		mg/L	1	1/30/2008
<b>TRIVALENT CHROMIUM IN WATER - 200.7&amp;3500C</b>						
						Analyst: <b>RP</b>
Trivalent Chromium	ND	0.060		mg/L	1	1/30/2008
<b>HEXAVALENT CHROMIUM - SM3500-CR-D</b>						
						Analyst: <b>WFR</b>
Chromium, Hexavalent	ND	0.0500		mg/L	1	1/29/2008
<b>TOTAL RESIDUAL CHLORINE - HACH 8167</b>						
						Analyst: <b>WFR</b>
Total Residual Chlorine	0.170	0.162		mg/L	1	1/29/2008

**Qualifiers:** B Analyte detected in the associated Method Blank  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

BRL Below Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit

CLIENT: ECS

Work Order: 0801281

Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_W

Sample ID: MB-9224	SampType: MBLK	TestCode: 6010B_W	Units: mg/L	Prep Date:	RunNo: 21777						
Client ID: ZZZZZ	Batch ID: 9224	TestNo: SW6010B	(SW3010A)	Analysis Date: 1/30/2008	SeqNo: 211598						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium	ND	0.00400									
Chromium	ND	0.0800									
Copper	ND	0.0400									
Nickel	ND	0.00400									
Zinc	ND	0.100									

Sample ID: LCS-9224	SampType: LCS	TestCode: 6010B_W	Units: mg/L	Prep Date:	RunNo: 21777						
Client ID: ZZZZZ	Batch ID: 9224	TestNo: SW6010B	(SW3010A)	Analysis Date: 1/30/2008	SeqNo: 211599						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium	1.900	0.00400	2	0	95.0	80	120				
Chromium	1.920	0.0800	2	0	96.0	80	120				
Copper	1.820	0.0400	2	0	91.0	80	120				
Nickel	1.940	0.00400	2	0.003	96.8	80	120				
Zinc	1.990	0.100	2	0.026	98.2	80	120				

Sample ID: LCSD-9224	SampType: LCS	TestCode: 6010B_W	Units: mg/L	Prep Date:	RunNo: 21777						
Client ID: ZZZZZ	Batch ID: 9224	TestNo: SW6010B	(SW3010A)	Analysis Date: 1/30/2008	SeqNo: 211600						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium	1.860	0.00400	2	0	93.0	80	120				
Chromium	1.910	0.0800	2	0	95.5	80	120				
Copper	1.840	0.0400	2	0	92.0	80	120				
Nickel	1.940	0.00400	2	0.003	96.8	80	120				
Zinc	1.980	0.100	2	0.026	97.7	80	120				

## Qualifiers:

BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
S	Spike Recovery outside recovery limits				



CLIENT: ECS

Work Order: 0801281

Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8082\_W

Sample ID: <b>WB1-9208</b>	SampType: <b>MBLK</b>	TestCode: <b>8082_W</b>	Units: <b>µg/L</b>	Prep Date: <b>1/29/2008</b>	RunNo: <b>21784</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>9208</b>	TestNo: <b>SW8082</b>	<b>(8100M)</b>	Analysis Date: <b>1/29/2008</b>	SeqNo: <b>211752</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1221 ND 0.0300

Aroclor 1232 ND 0.0300

Aroclor 1248 ND 0.0300

Aroclor 1254 ND 0.0300

Aroclor 1260 ND 0.0300

Aroclor 1262 ND 0.0300

Aroclor 1268 ND 0.0300

Surr: Decachlorobiphenyl Sig 1 84.00 0 100 0 84.0 30 150

Surr: Decachlorobiphenyl Sig 2 84.00 0 100 0 84.0 30 150

Surr: Tetrachloro-m-Xylene Sig 1 66.00 0 100 0 66.0 30 150

Surr: Tetrachloro-m-Xylene Sig 2 56.00 0 100 0 56.0 30 150

Sample ID: <b>LW1-9208</b>	SampType: <b>LCS</b>	TestCode: <b>8082_W</b>	Units: <b>µg/L</b>	Prep Date: <b>1/29/2008</b>	RunNo: <b>21784</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>9208</b>	TestNo: <b>SW8082</b>	<b>(8100M)</b>	Analysis Date: <b>1/29/2008</b>	SeqNo: <b>211750</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aroclor 1016/1242 92.40 0.0300 100 0 92.4 40 140

Aroclor 1221 ND 0.0300

Aroclor 1232 ND 0.0300

Aroclor 1248 ND 0.0300

Aroclor 1254 ND 0.0300

Aroclor 1260 87.30 0.0300 100 0 87.3 40 140

Aroclor 1262 ND 0.0300

Aroclor 1268 ND 0.0300

Surr: Decachlorobiphenyl Sig 1 92.00 0 100 0 92.0 30 150

Surr: Decachlorobiphenyl Sig 2 104.0 0 100 0 104 30 150

Surr: Tetrachloro-m-Xylene Sig 1 76.00 0 100 0 76.0 30 150

Surr: Tetrachloro-m-Xylene Sig 2 70.00 0 100 0 70.0 30 150

Qualifiers: BRL Below Reporting Limit

J Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

CLIENT: ECS  
 Work Order: 0801281  
 Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8082\_W

Sample ID: LW22-9208	SampleType: LCS	TestCode: 8082_W	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21784						
Client ID: ZZZZZ	Batch ID: 9208	TestNo: SW8082	(8100M)	Analysis Date: 1/29/2008	SeqNo: 211751						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016/1242	94.20	0.0300	100	0	94.2	40	140				
Aroclor 1221	ND	0.0300									
Aroclor 1232	ND	0.0300									
Aroclor 1248	ND	0.0300									
Aroclor 1254	ND	0.0300									
Aroclor 1260	77.00	0.0300	100	0	77.0	40	140				
Aroclor 1262	ND	0.0300									
Aroclor 1268	ND	0.0300									
Surr: Decachlorobiphenyl Sig 1	82.00	0	100	0	82.0	30	150				
Surr: Decachlorobiphenyl Sig 2	88.00	0	100	0	88.0	30	150				
Surr: Tetrachloro-m-Xylene Sig 1	64.00	0	100	0	64.0	30	150				
Surr: Tetrachloro-m-Xylene Sig 2	60.00	0	100	0	60.0	30	150				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B\_W

Sample ID: MB	SampType: MBLK	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 21820						
Client ID: ZZZZZ	Batch ID: R21820	TestNo: SW8260B		Analysis Date: 1/29/2008	SeqNo: 212162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.00									
1,1,1-Trichloroethane	ND	5.00									
1,1,2,2-Tetrachloroethane	ND	2.00									
1,1,2-Trichloroethane	ND	5.00									
1,1-Dichloroethane	ND	5.00									
1,1-Dichloroethene	ND	5.00									
1,1-Dichloropropene	ND	5.00									
1,2,3-Trichlorobenzene	ND	5.00									
1,2,3-Trichloropropane	ND	5.00									
1,2,4-Trichlorobenzene	ND	5.00									
1,2,4-Trimethylbenzene	ND	5.00									
1,2-Dibromo-3-Chloropropane	ND	5.00									
1,2-Dibromoethane	ND	2.00									
1,2-Dichlorobenzene	ND	5.00									
1,2-Dichloroethane	ND	2.00									
1,2-Dichloropropane	ND	2.00									
1,3,5-Trimethylbenzene	ND	5.00									
1,3-Dichlorobenzene	ND	5.00									
1,3-Dichloropropane	ND	5.00									
1,4-Dichlorobenzene	ND	5.00									
2,2-Dichloropropane	ND	5.00									
2-Butanone	ND	10.0									
2-Chloroethyl Vinyl Ether	ND	5.00									
2-Chlorotoluene	ND	5.00									
2-Hexanone	ND	10.0									
4-Chlorotoluene	ND	5.00									
4-Isopropyltoluene	ND	5.00									
4-Methyl-2-Pentanone	ND	5.00									
Acetone	ND	50.0									
Acrolein	ND	50.0									
Acrylonitrile	ND	50.0									

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				

CLIENT: ECS  
 Work Order: 0801281  
 Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B\_W

Sample ID: MB	SampType: MBLK	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 21820						
Client ID: ZZZZZ	Batch ID: R21820	TestNo: SW8260B		Analysis Date: 1/29/2008	SeqNo: 212162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	5.00									
Bromobenzene	ND	5.00									
Bromochloromethane	ND	2.00									
Bromodichloromethane	ND	2.00									
Bromoform	ND	2.00									
Bromomethane	ND	2.00									
Carbon Disulfide	ND	5.00									
Carbon Tetrachloride	ND	2.00									
Chlorobenzene	ND	5.00									
Chloroethane	ND	5.00									
Chloroform	ND	5.00									
Chloromethane	ND	5.00									
cis-1,2-Dichloroethene	ND	5.00									
cis-1,3-Dichloropropene	ND	0.500									
Dibromochloromethane	ND	2.00									
Dibromomethane	ND	5.00									
Dichlorodifluoromethane	ND	5.00									
Ethylbenzene	ND	5.00									
Hexachlorobutadiene	ND	0.500									
Isopropylbenzene	ND	5.00									
Methyl Tert-Butyl Ether	ND	5.00									
Methylene Chloride	ND	5.00									
Naphthalene	ND	20.0									
n-Butylbenzene	ND	5.00									
n-Propylbenzene	ND	5.00									
sec-Butylbenzene	ND	5.00									
Styrene	ND	5.00									
tert-Butylbenzene	ND	5.00									
Tetrachloroethene	ND	5.00									
Toluene	ND	5.00									
trans-1,2-Dichloroethene	ND	5.00									

Qualifiers: BRL Below Reporting Limit  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

E Value above quantitation range  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 R RPD outside recovery limits

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B\_W

Sample ID: MB	SampType: MBLK	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 21820						
Client ID: ZZZZZ	Batch ID: R21820	TestNo: SW8260B		Analysis Date: 1/29/2008	SeqNo: 212162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	ND	0.500									
Trichloroethene	ND	5.00									
Trichlorofluoromethane	ND	5.00									
Vinyl Chloride	ND	2.00									
Xylenes, Total	ND	5.00									
Surr: 1,2-Dichloroethane-d4	32.33	0	30	0	108	70	130				
Surr: 4-Bromofluorobenzene	35.07	0	30	0	117	70	130				
Surr: Dibromofluoromethane	30.75	0	30	0	103	70	130				
Surr: Toluene-d8	29.86	0	30	0	99.5	70	130				

Sample ID: LCS	SampType: LCS	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 21820						
Client ID: ZZZZZ	Batch ID: R21820	TestNo: SW8260B		Analysis Date: 1/29/2008	SeqNo: 212163						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	51.21	5.00	50	0	102	70	130				
1,1,1-Trichloroethane	60.59	5.00	50	0	121	70	130				
1,1,2,2-Tetrachloroethane	63.83	2.00	50	0	128	70	130				
1,1,2-Trichloroethane	58.96	5.00	50	0	118	70	130				
1,1-Dichloroethane	58.20	5.00	50	0	116	70	130				
1,1-Dichloroethene	56.85	5.00	50	0	114	70	130				
1,1-Dichloropropene	57.69	5.00	50	0	115	70	130				
1,2,3-Trichloropropane	60.70	5.00	50	0	121	70	130				
1,2,4-Trichlorobenzene	81.25	5.00	50	0	162	70	130				S
1,2,4-Trimethylbenzene	39.77	5.00	50	0	79.5	70	130				
1,2-Dibromoethane	57.92	2.00	50	0	116	70	130				
1,2-Dichlorobenzene	55.18	5.00	50	0	110	70	130				
1,2-Dichloroethane	62.80	2.00	50	0	126	70	130				
1,2-Dichloropropane	61.54	2.00	50	0	123	70	130				
1,3,5-Trimethylbenzene	40.52	5.00	50	0	81.0	70	130				
1,3-Dichlorobenzene	51.47	5.00	50	0	103	70	130				

Qualifiers: BRL Below Reporting Limit  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
H Holding times for preparation or analysis exceeded  
R RPD outside recovery limits

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B\_W

Sample ID: LCS		SampType: LCS		TestCode: 8260B_W		Units: µg/L		Prep Date:		RunNo: 21820	
Client ID: ZZZZ		Batch ID: R21820		TestNo: SW8260B				Analysis Date: 1/29/2008		SeqNo: 212163	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichloropropane	55.98	5.00	50	0	112	70	130				
1,4-Dichlorobenzene	50.82	5.00	50	0	102	70	130				
2,2-Dichloropropane	54.35	5.00	50	0	109	70	130				
2-Butanone	62.72	10.0	50	0	125	70	130				
2-Chloroethyl Vinyl Ether	61.38	5.00	50	0	123	70	130				
2-Chlorotoluene	47.24	5.00	50	0	94.5	70	130				
2-Hexanone	62.95	10.0	50	0	126	70	130				
4-Chlorotoluene	41.02	5.00	50	0	82.0	70	130				
4-Isopropyltoluene	46.38	5.00	50	0	92.8	70	130				
4-Methyl-2-Pentanone	64.47	5.00	50	0	129	70	130				
Acetone	59.68	50.0	50	0	119	70	130				
Benzene	61.24	5.00	50	0	122	70	130				
Bromobenzene	49.13	5.00	50	0	98.3	70	130				
Bromochloromethane	62.56	2.00	50	0	125	70	130				
Bromodichloromethane	59.21	2.00	50	0	118	70	130				
Bromoform	61.66	2.00	50	0	123	70	130				
Bromomethane	47.78	2.00	50	0	95.6	70	130				
Carbon Disulfide	52.75	5.00	50	0	106	70	130				
Carbon Tetrachloride	59.75	2.00	50	0	120	70	130				
Chlorobenzene	46.87	5.00	50	0	93.7	70	130				
Chloroethane	48.93	5.00	50	0	97.9	70	130				
Chloroform	61.04	5.00	50	0	122	70	130				
Chloromethane	43.49	5.00	50	0	87.0	70	130				
cis-1,2-Dichloroethene	58.23	5.00	50	0	116	70	130				
cis-1,3-Dichloropropene	59.46	0.500	50	0	119	70	130				
Dibromochloromethane	58.70	2.00	50	0	117	70	130				
Dibromomethane	64.25	5.00	50	0	128	70	130				
Dichlorodifluoromethane	38.57	5.00	50	0	77.1	70	130				
Ethylbenzene	49.11	5.00	50	0	98.2	70	130				
Hexachlorobutadiene	57.55	0.500	50	0	115	70	130				
Isopropylbenzene	48.81	5.00	50	0	97.6	70	130				

**Qualifiers:** BRL Below Reporting Limit  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside recovery limits

CLIENT: ECS  
 Work Order: 0801281  
 Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B\_W

Sample ID: LCS	SampType: LCS	TestCode: 8260B_W	Units: µg/L	Prep Date:	RunNo: 21820						
Client ID: ZZZZZ	Batch ID: R21820	TestNo: SW8260B		Analysis Date: 1/29/2008	SeqNo: 212163						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl Tert-Butyl Ether	70.19	5.00	50	0	140	70	130				S
Methylene Chloride	59.91	5.00	50	0	120	70	130				
Naphthalene	108.5	20.0	50	0	217	70	130				S
n-Butylbenzene	39.98	5.00	50	0	80.0	70	130				
n-Propylbenzene	44.70	5.00	50	0	89.4	70	130				
sec-Butylbenzene	52.89	5.00	50	0	106	70	130				
Styrene	44.10	5.00	50	0	88.2	70	130				
tert-Butylbenzene	51.19	5.00	50	0	102	70	130				
Tetrachloroethene	51.91	5.00	50	0	104	70	130				
Toluene	49.33	5.00	50	0	98.7	70	130				
trans-1,2-Dichloroethene	57.70	5.00	50	0	115	70	130				
trans-1,3-Dichloropropene	51.95	0.500	50	0	104	70	130				
Trichloroethene	52.25	5.00	50	0	104	70	130				
Trichlorofluoromethane	47.89	5.00	50	0	95.8	70	130				
Vinyl Chloride	46.99	2.00	50	0	94.0	70	130				
Xylenes, Total	141.6	5.00	150	0	94.4	70	130				
Surr: 1,2-Dichloroethane-d4	33.52	0	30	0	112	70	130				
Surr: 4-Bromofluorobenzene	27.03	0	30	0	90.1	70	130				
Surr: Dibromofluoromethane	34.62	0	30	0	115	70	130				
Surr: Toluene-d8	28.90	0	30	0	96.3	70	130				

Qualifiers: BRL Below Reporting Limit  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

E Value above quantitation range  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 R RPD outside recovery limits

CLIENT: ECS  
 Work Order: 0801281  
 Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_w

Sample ID: WB1-9206	SampType: MBLK	TestCode: 8270_W	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21765						
Client ID: ZZZZZ	Batch ID: 9206	TestNo: SW8270C	(SW3510)	Analysis Date: 1/29/2008	SeqNo: 211849						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dinitrobenzene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,3-Dinitrobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
1,4-Dinitrobenzene	ND	1.00									
2,3,4,6-Tetrachlorophenol	ND	1.00									
2,4,5-Trichlorophenol	ND	1.00									
2,4,6-Trichlorophenol	ND	1.00									
2,4-Dichlorophenol	ND	1.00									
2,4-Dimethylphenol	ND	1.00									
2,4-Dinitrophenol	ND	5.00									
2,4-Dinitrotoluene	ND	1.00									
2,6-Dinitrotoluene	ND	1.00									
2-Chloronaphthalene	ND	1.00									
2-Chlorophenol	ND	1.00									
2-Methylnaphthalene	ND	1.00									
2-Methylphenol	ND	1.00									
2-Nitroaniline	ND	1.00									
2-Nitrophenol	ND	1.00									
3,3'-Dichlorobenzidine	ND	1.00									
3-Methylphenol/4-Methylphenol	ND	1.00									
3-Nitroaniline	ND	1.00									
4,6-Dinitro-2-Methylphenol	ND	5.00									
4-Bromophenyl Phenyl Ether	ND	1.00									
4-Chloro-3-Methylphenol	ND	1.00									
4-Chloroaniline	ND	1.00									
4-Chlorophenyl Phenyl Ether	ND	1.00									
4-Nitroaniline	ND	1.00									
4-Nitrophenol	ND	1.00									

**Qualifiers:** BRL Below Reporting Limit  
 J Analyte detected below quantitation limits  
 S Spike Recovery outside recovery limits

E Value above quantitation range  
 ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
 R RPD outside recovery limits

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CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_w

Sample ID: WB1-9206	SampType: MBLK	TestCode: 8270_W	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21765						
Client ID: ZZZZZ	Batch ID: 9206	TestNo: SW8270C	(SW3510)	Analysis Date: 1/29/2008	SeqNo: 211849						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	1.00									
Acenaphthylene	ND	1.00									
Acetophenone	ND	1.00									
Aniline	ND	5.00									
Anthracene	ND	1.00									
Azobenzene	ND	5.00									
Benz(a)Anthracene	ND	0.100									
Benzidine	ND	5.00									
Benzo(a)Pyrene	ND	0.100									
Benzo(b)Fluoranthene	ND	0.500									
Benzo(g,h,i)Perylene	ND	1.00									
Benzo(k)Fluoranthene	ND	0.500									
Benzyl Alcohol	ND	1.00									
Bis(2-Chloroethoxy)Methane	ND	1.00									
Bis(2-Chloroethyl)Ether	ND	1.00									
Bis(2-Chloroisopropyl)Ether	ND	1.00									
Bis(2-Ethylhexyl)Phthalate	ND	1.00									
Butyl Benzyl Phthalate	ND	1.00									
Carbazole	ND	1.00									
Chrysene	ND	1.00									
Dibenz(a,h)Anthracene	ND	0.100									
Dibenzofuran	ND	1.00									
Diethyl Phthalate	ND	1.00									
Dimethyl Phthalate	ND	1.00									
Di-n-Butyl Phthalate	ND	1.00									
Di-n-Octyl Phthalate	ND	1.00									
Fluoranthene	ND	1.00									
Fluorene	ND	1.00									
Hexachlorobenzene	ND	0.100									
Hexachlorobutadiene	ND	0.100									
Hexachlorocyclopentadiene	ND	5.00									

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
S	Spike Recovery outside recovery limits					

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_w

Sample ID: <b>WB1-9206</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_W</b>	Units: <b>µg/L</b>	Prep Date: <b>1/29/2008</b>	RunNo: <b>21765</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>9206</b>	TestNo: <b>SW8270C</b>	( <b>SW3510</b> )	Analysis Date: <b>1/29/2008</b>	SeqNo: <b>211849</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexachloroethane	ND	1.00									
Indeno(1,2,3-cd)Pyrene	ND	0.100									
Isophorone	ND	1.00									
Naphthalene	ND	1.00									
Nitrobenzene	ND	1.00									
N-Nitrosodimethylamine	ND	5.00									
N-Nitrosodi-n-Propylamine	ND	1.00									
N-Nitrosodiphenylamine	ND	5.00									
Pentachlorophenol	ND	1.00									
Phenanthrene	ND	1.00									
Phenol	ND	1.00									
Pyrene	ND	1.00									
Pyridine	ND	5.00									
Surr: 2,4,6-Tribromophenol	112.6	0	75	0	150	15	150				S
Surr: 2-Fluorobiphenyl	22.74	0	50	0	45.5	30	130				
Surr: 2-Fluorophenol	44.19	0	75	0	58.9	15	110				
Surr: Nitrobenzene-d5	26.13	0	50	0	52.3	30	130				
Surr: Phenol-d6	34.24	0	75	0	45.7	15	110				
Surr: Terphenyl-d14	30.76	0	50	0	61.5	30	130				

Sample ID: LW1-9206	SampType: LCS	TestCode: 8270_w	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21765						
Client ID: ZZZZZ	Batch ID: 9206	TestNo: SW8270C	(SW3510)	Analysis Date: 1/29/2008	SeqNo: 211850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,4-Trichlorobenzene	14.72	1.00	25	0	58.9	40	140				
1,2-Dichlorobenzene	15.88	1.00	25	0	63.5	40	140				
1,2-Dinitrobenzene	18.38	1.00	25	0	73.5	40	140				
1,3-Dichlorobenzene	15.04	1.00	25	0	60.2	40	140				
1,3-Dinitrobenzene	20.12	1.00	25	0	80.5	40	140				
1,4-Dichlorobenzene	15.12	1.00	25	0	60.5	40	140				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_w

Sample ID: LW1-9206	SampType: LCS	TestCode: 8270_w	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21765						
Client ID: ZZZZZ	Batch ID: 9206	TestNo: SW8270C	(SW3510)	Analysis Date: 1/29/2008	SeqNo: 211850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dinitrobenzene	20.00	1.00	25	0	80.0	40	140				
2,3,4,6-Tetrachlorophenol	17.71	1.00	25	0	70.8	30	130				
2,4,5-Trichlorophenol	19.58	1.00	25	0	78.3	30	130				
2,4,6-Trichlorophenol	18.36	1.00	25	0	73.4	30	130				
2,4-Dichlorophenol	17.49	1.00	25	0	70.0	30	130				
2,4-Dimethylphenol	18.04	1.00	25	0	72.2	30	130				
2,4-Dinitrophenol	ND	5.00	25	0	0	30	130				S
2,4-Dinitrotoluene	17.08	1.00	25	0	68.3	40	140				
2,6-Dinitrotoluene	20.74	1.00	25	0	83.0	40	140				
2-Chloronaphthalene	16.22	1.00	25	0	64.9	40	140				
2-Chlorophenol	19.06	1.00	25	0	76.2	30	130				
2-Methylnaphthalene	17.68	1.00	25	0	70.7	40	140				
2-Methylphenol	19.21	1.00	25	0	76.8	30	130				
2-Nitroaniline	24.50	1.00	25	0	98.0	40	140				
3,3'-Dichlorobenzidine	19.17	1.00	25	0	76.7	40	140				
3-Methylphenol/4-Methylphenol	16.84	1.00	25	0	67.4	30	130				
3-Nitroaniline	29.06	1.00	25	0	116	40	140				
4-Bromophenyl Phenyl Ether	17.22	1.00	25	0	68.9	40	140				
4-Chloro-3-Methylphenol	22.40	1.00	25	0	89.6	30	130				
4-Chloroaniline	20.54	1.00	25	0	82.2	40	140				
4-Chlorophenyl Phenyl Ether	15.62	1.00	25	0	62.5	40	140				
4-Nitroaniline	29.06	1.00	25	0	116	40	140				
4-Nitrophenol	8.060	1.00	25	0	32.2	30	130				
Acenaphthene	17.13	1.00	25	0	68.5	40	140				
Acenaphthylene	17.92	1.00	25	0	71.7	40	140				
Acetophenone	16.42	1.00	25	0	65.7	40	140				
Aniline	13.90	5.00	25	0	55.6	40	140				
Anthracene	18.74	1.00	25	0	74.9	40	140				
Azobenzene	18.59	5.00	25	0	74.4	40	140				
Benz(a)Anthracene	18.46	0.100	25	0	73.8	40	140				
Benzo(a)Pyrene	17.41	0.100	25	0	69.6	40	140				

**Qualifiers:** BRL Below Reporting Limit  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

**E** Value above quantitation range  
ND Not Detected at the Reporting Limit

**H** Holding times for preparation or analysis exceeded  
R RPD outside recovery limits

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CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_w

Sample ID: LW1-9206	SampType: LCS	TestCode: 8270_w	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21765						
Client ID: ZZZZZ	Batch ID: 9206	TestNo: SW8270C	(SW3510)	Analysis Date: 1/29/2008	SeqNo: 211850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(b)Fluoranthene	18.72	0.500	25	0	74.9	40	140				
Benzo(g,h,i)Perylene	18.17	1.00	25	0	72.7	40	140				
Benzo(k)Fluoranthene	16.37	0.500	25	0	65.5	40	140				
Benzyl Alcohol	19.18	1.00	25	0	76.7	40	140				
Bis(2-Chloroethoxy)Methane	17.56	1.00	25	0	70.3	40	140				
Bis(2-Chloroethyl)Ether	18.06	1.00	25	0	72.2	40	140				
Bis(2-Chloroisopropyl)Ether	22.34	1.00	25	0	89.4	40	140				
Bis(2-Ethylhexyl)Phthalate	20.75	1.00	25	0	83.0	40	140				
Butyl Benzyl Phthalate	22.12	1.00	25	0	88.5	40	140				
Carbazole	21.24	1.00	25	0	84.9	40	140				
Chrysene	18.98	1.00	25	0	75.9	40	140				
Dibenz(a,h)Anthracene	16.62	0.100	25	0	66.5	40	140				
Dibenzofuran	18.38	1.00	25	0	73.5	40	140				
Diethyl Phthalate	19.33	1.00	25	0	77.3	40	140				
Dimethyl Phthalate	15.58	1.00	25	0	62.3	40	140				
Di-n-Butyl Phthalate	17.10	1.00	25	0	68.4	40	140				
Di-n-Octyl Phthalate	20.84	1.00	25	0	83.4	40	140				
Fluoranthene	20.56	1.00	25	0	82.3	40	140				
Fluorene	16.70	1.00	25	0	66.8	40	140				
Hexachlorobenzene	16.86	0.100	25	0	67.4	40	140				
Hexachlorobutadiene	13.80	0.100	25	0	55.2	40	140				
Hexachloroethane	13.60	1.00	25	0	54.4	40	140				
Indeno(1,2,3-cd)Pyrene	17.03	0.100	25	0	68.1	40	140				
Isophorone	19.04	1.00	25	0	76.2	40	140				
Naphthalene	16.58	1.00	25	0	66.3	40	140				
Nitrobenzene	24.48	1.00	25	0	97.9	40	140				
N-Nitrosodimethylamine	21.02	5.00	25	0	84.1	40	140				
N-Nitrosodi-n-Propylamine	22.01	1.00	25	0	88.0	40	140				
N-Nitrosodiphenylamine	17.46	5.00	25	0	69.9	40	140				
Pentachlorophenol	8.530	1.00	25	0	34.1	30	130				
Phenanthrene	18.46	1.00	25	0	73.8	40	140				

**Qualifiers:** BRL Below Reporting Limit  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside recovery limits

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CLIENT: ECS  
 Work Order: 0801281  
 Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270\_w

Sample ID: LW1-9206	SampType: LCS	TestCode: 8270_w	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21765						
Client ID: ZZZZZ	Batch ID: 9206	TestNo: SW8270C	(SW3510)	Analysis Date: 1/29/2008	SeqNo: 211850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	10.06	1.00	25	0	40.2	30	130				
Pyrene	19.24	1.00	25	0	77.0	40	140				
Pyridine	11.58	5.00	25	0	46.3	40	140				
Surr: 2,4,6-Tribromophenol	124.6	0	75	0	166	15	110				S
Surr: 2-Fluorobiphenyl	24.02	0	50	0	48.0	30	130				
Surr: 2-Fluorophenol	47.02	0	75	0	62.7	15	110				
Surr: Nitrobenzene-d5	27.51	0	50	0	55.0	30	130				
Surr: Phenol-d6	37.43	0	75	0	49.9	15	110				
Surr: Terphenyl-d14	31.89	0	50	0	63.8	30	130				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: AG\_W

Sample ID: MB-9224	Sample Type: MBLK	TestCode: AG_W	Units: mg/L	Prep Date:	RunNo: 21795
Client ID: ZZZZZ	Batch ID: 9224	TestNo: 200.7	(SW3010A)	Analysis Date: 1/30/2008	SeqNo: 211816
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Silver	ND	0.00700			

Sample ID: LCS-9224	Sample Type: LCS	TestCode: AG_W	Units: mg/L	Prep Date:	RunNo: 21795
Client ID: ZZZZZ	Batch ID: 9224	TestNo: 200.7	(SW3010A)	Analysis Date: 1/30/2008	SeqNo: 211817
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Silver	0.2010	0.00700	0.2	0	101 80 120

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: CN\_W\_SM

Sample ID: MB-R21799	SampleType: MBLK	TestCode: CN_W_SM	Units: mg/L	Prep Date:	RunNo: 21799						
Client ID: ZZZZZ	Batch ID: R21799	TestNo: SM 4500-CN-		Analysis Date: 1/30/2008	SeqNo: 211908						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cyanide, Total ND 0.0197

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: Cr6\_WW

Sample ID: MB-R21768	SampType: MBLK	TestCode: Cr6_WW	Units: mg/L	Prep Date:	RunNo: 21768						
Client ID: ZZZZZ	Batch ID: R21768	TestNo: M3500-Cr D		Analysis Date: 1/29/2008	SeqNo: 211502						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.0500									

Sample ID: LCS-R21768	SampType: LCS	TestCode: Cr6_WW	Units: mg/L	Prep Date:	RunNo: 21768						
Client ID: ZZZZZ	Batch ID: R21768	TestNo: M3500-Cr D		Analysis Date: 1/29/2008	SeqNo: 211503						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	0.4685	0.0500	0.5	0	93.7	85	115				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				



CLIENT: ECS

Work Order: 0801281

Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: EPHP\_W

Sample ID: MB-9221	SampType: MBLK	TestCode: EPHP_W	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21785						
Client ID: ZZZZZ	Batch ID: 9221	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 1/29/2008	SeqNo: 211720						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Naphthalene	ND	1.00									
2-Methylnaphthalene	ND	1.00									
Acenaphthene	ND	1.00									
Phenanthrene	ND	1.00									
Acenaphthylene	ND	1.00									
Fluorene	ND	1.00									
Anthracene	ND	1.00									
Fluoranthene	ND	1.00									
Pyrene	ND	1.00									
Benzo(a)Anthracene	ND	0.400									
Chrysene	ND	1.00									
Benzo(b)Fluoranthene	ND	1.00									
Benzo(k)Fluoranthene	ND	1.00									
Benzo(a)Pyrene	ND	0.200									
Indeno(1,2,3-cd)Pyrene	ND	0.400									
Dibenz(a,h)Anthracene	ND	0.400									
Benzo(g,h,i)Perylene	ND	1.00									
Total PAH Target Concentration	ND	0									
Surr: 2,2'-Difluorobiphenyl	14.84	0	25	0	59.4	40	140				
Surr: 2-Fluorobiphenyl	15.82	0	25	0	63.3	40	140				

Sample ID: LCS-9221	SampType: LCS	TestCode: EPHP_W	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21785						
Client ID: ZZZZZ	Batch ID: 9221	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 1/29/2008	SeqNo: 211721						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Naphthalene	20.18	1.00	50	0	40.4	40	140				
2-Methylnaphthalene	22.29	1.00	50	0	44.6	40	140				
Acenaphthene	26.56	1.00	50	0	53.1	40	140				
Phenanthrene	27.20	1.00	50	0	54.4	40	140				
Acenaphthylene	25.52	1.00	50	0	51.0	40	140				

Qualifiers: BRL Below Reporting Limit

J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

E Value above quantitation range

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

R RPD outside recovery limits

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: EPHP\_W

Sample ID: LCS-9221	SampType: LCS	TestCode: EPHP_W	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21785						
Client ID: ZZZZZ	Batch ID: 9221	TestNo: MADEP EPH_ (eph_Wpr)		Analysis Date: 1/29/2008	SeqNo: 211721						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	25.00	1.00	50	0	50.0	40	140				
Anthracene	28.65	1.00	50	0	57.3	40	140				
Fluoranthene	21.77	1.00	50	0	43.5	40	140				
Pyrene	29.39	1.00	50	0	58.8	40	140				
Benzo(a)Anthracene	27.35	0.400	50	0	54.7	40	140				
Chrysene	34.61	1.00	50	0	69.2	40	140				
Benzo(b)Fluoranthene	29.64	1.00	50	0	59.3	40	140				
Benzo(k)Fluoranthene	39.27	1.00	50	0	78.5	40	140				
Benzo(a)Pyrene	38.91	0.200	50	0	77.8	40	140				
Indeno(1,2,3-cd)Pyrene	25.23	0.400	50	0	50.5	40	140				
Dibenz(a,h)Anthracene	25.06	0.400	50	0	50.1	40	140				
Benzo(g,h,i)Perylene	24.23	1.00	50	0	48.5	40	140				
Surr: 2,2'-Difluorobiphenyl	15.24	0	25	0	61.0	40	140				
Surr: 2-Fluorobiphenyl	17.20	0	25	0	68.8	40	140				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits	
S	Spike Recovery outside recovery limits					

CLIENT: ECS

Work Order: 0801281

Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: epht\_w

Sample ID: MB-9221	SampleType: MBLK	TestCode: epht_w	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21789						
Client ID: ZZZZZ	Batch ID: 9221	TestNo: MADEP EPH	(eph_Wpr)	Analysis Date: 1/30/2008	SeqNo: 211768						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Adjusted C11-C22 Aromatics

C09-C18 Aliphatics

C19-C36 Aliphatics

Unadjusted C11-C22 Aromatics

Surr: 1-Chlorooctadecane

Surr: o-Terphenyl

Sample ID: LCS-9221	SampleType: LCS	TestCode: epht_w	Units: µg/L	Prep Date: 1/29/2008	RunNo: 21789						
Client ID: ZZZZZ	Batch ID: 9221	TestNo: MADEP EPH	(eph_Wpr)	Analysis Date: 1/30/2008	SeqNo: 211769						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

C09-C18 Aliphatics

C19-C36 Aliphatics

Unadjusted C11-C22 Aromatics

Surr: 1-Chlorooctadecane

Surr: o-Terphenyl

Qualifiers: BRL Below Reporting Limit

J Analyte detected below quantitation limits

S Spike Recovery outside recovery limits

E Value above quantitation range

ND Not Detected at the Reporting Limit

H

R RPD outside recovery limits

H Holding times for preparation or analysis exceeded

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: HG-245.1\_W

Sample ID: <b>MBLK-9223</b>	SampleType: <b>MBLK</b>	TestCode: <b>HG-245.1_W</b>	Units: <b>mg/L</b>	Prep Date: <b>1/29/2008</b>	RunNo: <b>21757</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>9223</b>	TestNo: <b>E245.1</b>	( <b>SW7470A/E2</b> )	Analysis Date: <b>1/29/2008</b>	SeqNo: <b>211434</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.000500									

Sample ID: LCS-9223	SampleType: LCS	TestCode: HG-245.1_W	Units: mg/L	Prep Date: 1/29/2008	RunNo: 21757						
Client ID: ZZZZZ	Batch ID: 9223	TestNo: E245.1	(SW7470A/E2	Analysis Date: 1/29/2008	SeqNo: 211429						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005320	0.000500	0.005	0	106	80	120				

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: TPH\_W

Sample ID: <b>WB1-9208</b>	SampType: <b>MBLK</b>	TestCode: <b>TPH_W</b>	Units: <b>mg/L</b>	Prep Date: <b>1/29/2008</b>	RunNo: <b>21772</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>9208</b>	TestNo: <b>8100M</b>	( <b>8100M</b> )	Analysis Date: <b>1/29/2008</b>	SeqNo: <b>211556</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Petroleum Hydrocarbons  
Surr: o-Terphenyl

0.200  
0 100 0 79.0 40 140

Sample ID: LW1-9208	SampType: LCS	TestCode: TPH_W	Units: mg/L	Prep Date: 1/29/2008	RunNo: 21772						
Client ID: ZZZZZ	Batch ID: 9208	TestNo: 8100M	(8100M)	Analysis Date: 1/29/2008	SeqNo: 211554						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Petroleum Hydrocarbons  
Surr: o-Terphenyl

1.694  
97.00 0.200 0 2 100 0 84.7 40 140  
97.00 0 100 0 97.0 40 140

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: TRC\_W

Sample ID: MB-R21747	SampleType: MBLK	TestCode: TRC_W	Units: mg/L	Prep Date:	RunNo: 21747						
Client ID: ZZZZZ	Batch ID: R21747	TestNo: Hach 8167		Analysis Date: 1/29/2008	SeqNo: 211327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Residual Chlorine	ND	0.162									

Sample ID: LCS-R21747	SampType: LCS	TestCode: TRC_W	Units: mg/L	Prep Date:	RunNo: 21747						
Client ID: ZZZZZ	Batch ID: R21747	TestNo: Hach 8167		Analysis Date: 1/29/2008	SeqNo: 211328						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Residual Chlorine	1.010	0.162	1	0	101	85	115				

### Qualifiers:

BRL Below Reporting Limit  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside recovery limits

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: TSS

Sample ID: MB-R21745	SampleType: MBLK	TestCode: TSS	Units: mg/L	Prep Date:	RunNo: 21745						
Client ID: ZZZZZ	Batch ID: R21745	TestNo: E160.2		Analysis Date: 1/28/2008	SeqNo: 211313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	ND	4.00									

Sample ID: LCS-R21745	SampType: LCS	TestCode: TSS	Units: mg/L	Prep Date:	RunNo: 21745						
Client ID: ZZZZZ	Batch ID: R21745	TestNo: E160.2		Analysis Date: 1/28/2008	SeqNo: 211314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	83.00	4.00	85.9	1	95.5	80	120				

Qualifiers: BRL Below Reporting Limit  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside recovery limits

CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

# ANALYTICAL QC SUMMARY REPORT

TestCode: VPH\_W2

Sample ID: <b>MBLK</b>	SampType: <b>MBLK</b>	TestCode: <b>VPH_W2</b>	Units: <b>µg/L</b>	Prep Date:	RunNo: <b>21773</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R21773</b>	TestNo: <b>VPH</b>		Analysis Date: <b>1/29/2008</b>	SeqNo: <b>211563</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

C9-C10 Aromatic Hydrocarbons	ND	75.0									
Unadjusted C5-C8 Aliphatic Hydrocarb	ND	75.0									
Unadjusted C9-C12 Aliphatic Hydrocarb	ND	75.0									
Methyl Tert-Butyl Ether	ND	5.00									
Benzene	ND	5.00									
Toluene	ND	5.00									
Ethylbenzene	ND	5.00									
m,p-Xylene	ND	5.00									
o-Xylene	ND	5.00									
Naphthalene	ND	20.0									
Adjusted C5-C8 Aliphatic Hydrocarbons	ND	75.0									
Adjusted C9-C12 Aliphatic Hydrocarbon	ND	75.0									
Surr: 2,5-Dibromotoluene FID	85.57	0	100			0			85.6	70	130
Surr: 2,5-Dibromotoluene PID	72.27	0	100			0			72.3	70	130

Sample ID: LCS	SampType: LCS	TestCode: VPH_W2	Units: µg/L	Prep Date:	RunNo: 21773						
Client ID: ZZZZZ	Batch ID: R21773	TestNo: VPH		Analysis Date: 1/29/2008	SeqNo: 211561						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

C9-C10 Aromatic Hydrocarbons	82.06	75.0	100	2.363		79.7	70			130	
Unadjusted C5-C8 Aliphatic Hydrocarb	619.8	75.0	600	52.8		94.5	70			130	
Unadjusted C9-C12 Aliphatic Hydrocarb	511.7	75.0	600	22.87		81.5	70			130	
Methyl Tert-Butyl Ether	93.26	5.00	100	0		93.3	70			130	
Benzene	95.92	5.00	100	0		95.9	70			130	
Toluene	105.2	5.00	100	0		105	70			130	
Ethylbenzene	108.4	5.00	100	0		108	70			130	
m,p-Xylene	237.3	5.00	200	0		119	70			130	
o-Xylene	103.8	5.00	100	0		104	70			130	
Naphthalene	71.59	20.0	100	0		71.6	70			130	
Surr: 2,5-Dibromotoluene FID	89.68	0	100	0		89.7	70			130	

Qualifiers: BRL Below Reporting Limit  
J Analyte detected below quantitation limits  
S Spike Recovery outside recovery limits

E Value above quantitation range  
ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded  
R RPD outside recovery limits



CLIENT: ECS  
Work Order: 0801281  
Project: 91-205546

## ANALYTICAL QC SUMMARY REPORT

TestCode: VPH\_W2

Sample ID: LCS	SampType: LCS	TestCode: VPH_W2	Units: µg/L	Prep Date:	RunNo: 21773						
Client ID: ZZZZZ	Batch ID: R21773	TestNo: VPH		Analysis Date: 1/29/2008	SeqNo: 211561						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 2,5-Dibromotoluene PID

130

70

83.0

0

100

0

83.03

Qualifiers:	BRL	Below Reporting Limit	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside recovery limits
	S	Spike Recovery outside recovery limits				



